

**REVEALED** BEST OF BRITISH CINEMA ROOMS

**3D THX TV**

LG's 50-incher  
p44



# HOME CINEMA

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OPPO BDP-93EU 3D BD DIGITALSTREAM DPS-1000 MEDIA PLAYER

**Choice**

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**Exclusive** First review of B&W's 800 Series Diamond 5.1 system

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BEST FOR  
QUALITY?



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Samsung's 55in flagship  
TV tested

**MAGIC  
TABLETS**  
Using smart  
devices with  
your home  
cinema p80



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XV-Z17000 DLP PROJECTOR → INSIDE B&W'S FACTORY

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Shine on you crazy  
Diamond, p40

# WELCOME

Should you need any encouragement to create your own dedicated home cinema space, this issue should provide it. Our showcase of the 2011 CEDIA Zone 1 Award winners presents such breathtaking projects that you'll never be satisfied until you've got your house in order!



Meanwhile, there's no shortage of gear to put in your dream home cinema; **from B&W's gorgeous Diamond 800 Series 5.1 system on page 40, to Yamaha's YSP-2200 soundbar on page 52, there are sound options for everyone.** And with TVs such as LG's THX flagship on page 44 and Samsung's giant LED on page 48, displays don't go un-noticed either.

We also have a look behind the scenes at how B&W makes those lovely Diamonds and why Freesat's TV service may just offer the highest quality broadcasting you can enjoy for free.

Every issue we aim to give you all the info you need to bring your home cinema up to award-winning standards!

Editor

*Chris Jenkins*

## TEAM HCC

**Chris Jenkins:**  
Industry veteran Chris remembers when movies came on stone tablets



**Mark Craven:**  
HCC's Deputy Editor is as passionate about AV gear as he is about Jason Statham



**Anton van Beek:**  
Anton's love of cinema makes him the fount of all movie knowledge



**James Waldron:**  
Taking on our tech testing calls on James' in-depth audio engineering skills



**Jill Lubetkin:**  
Jill's magazine skills mean that even the techiest articles make perfect sense



**John Rook:**  
Art Editor John was here when amps were all silver the first time around





# MENU

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Designs AV  
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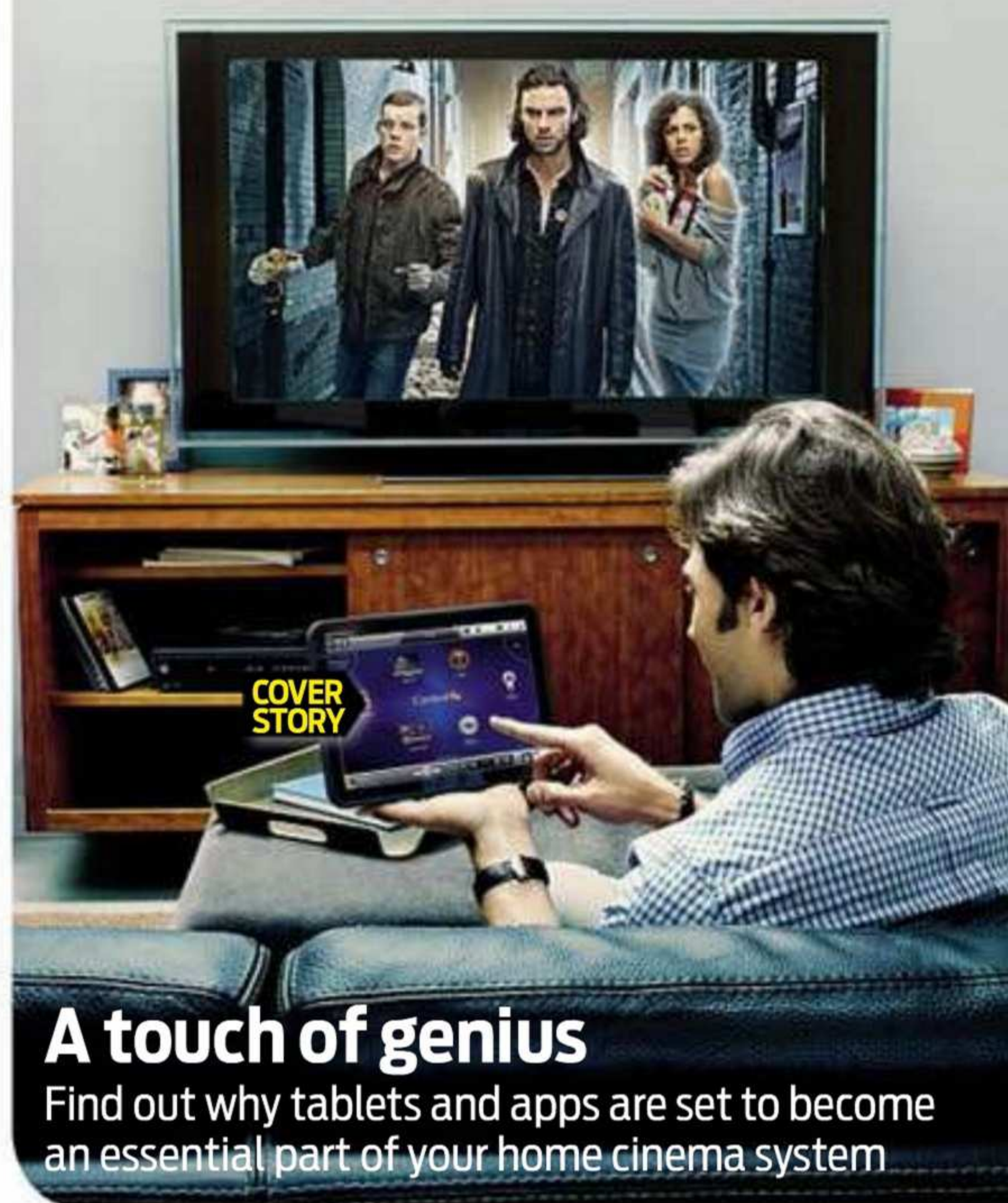


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## TECH LABS

### Our guarantee to you:

Equipment reviewed in *Home Cinema Choice* is measured and quantified by Future Tech Labs, which for more than 15 years has set the standard for independent AV test & measurement. The findings of the Tech Labs are used to underpin the subjective opinions of our Reviews team, ensuring that you receive the best possible advice when it comes to planning your next purchase



## CO-STARRING

This issue's team of expert writers are the best qualified in the business

### Adam Rayner:

The UK's foremost expert in extreme audio writes about bass, hi-fi and cartoons



### Richard Stevenson:

Industry veteran and former Editor of UK CE trade journal ERT



### John Archer:

The UK's most experienced TV tester cut his teeth as an early HCC staffer



### Martin Pipe:

Technology specialist Martin co-developed HCC's Tech Lab operation



### Steve May:

HCC's former Editor-in-Chief is one of the UK's most respected AV journo



### Adrian Justins:

Made his name as the editor of *What Video & TV* and *What Home Cinema*







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# BULLETIN

→ **News highlights** PSB Image Series speakers offer £1,500 5.1 array  
**LOEWE** Active shutter 3DTV on the way from designer brand **STAR WARS** Final details of long-awaited BD confirmed **SONY** Tech giant apologises for PlayStation network hack **HCC AWARDS** Winners collect their gongs **PHILIPS** TV division is on a slow boat to China **AND MORE!**

## Crystal amazes

SIM2 Crystal 35 → [www.sim2.co.uk](http://www.sim2.co.uk)



Whenever we think of a home cinema projector, our first thoughts inevitably turn to a big, black box that's best kept hidden from view. However, Italian PJ specialist SIM2 is going all-out to change our mind with its gorgeous Crystal 35. Priced around £4,500 and designed by renowned industrial doodler Giorgio Revoldini, the full HD Crystal 35 is housed in a striking glass finish cabinet (available in a choice of black or white) and features a 280W lamp capable of generating 2,000 Lumens and a claimed 30,000:1 contrast ratio. Look out for a review soon.

### HCC Online...

Looking for breaking AV news, blogs, features, & reviews? For your daily fix visit us at [www.homecinemachoice.com](http://www.homecinemachoice.com) Follow us on Twitter @hccmag



# Pleasure domes

PSB Image 5  
www.psbspeakers.com



## Partner with...

### Onkyo TX-NR709

THX Select2 Plus AVR → £800 Approx



Onkyo is back with another affordable mid-range receiver. The THX-certified 7.2-channel TX-NR709 is Spotify-enabled and offers upscaling to 4K, thanks to Marvell's state-of-the-art Qdeo technology. Other features include eight HDMI inputs, dual HDMI outputs, TI Burr-Brown PCM1690 192kHz/24-bit DACs, 3D video support, network functionality and a front-mounted USB to connect iPods/iPhones and storage devices.

www.onkyo.co.uk

Having picked up an *HCC* Best Buy Award for its Imagine Series mid-range speakers last issue, Canadian manufacturer PSB has now unleashed a brand-new speaker range. Dubbed Image 5, the lineup consists of three models, the T5 Tower, the B5 Bookshelf and the C5 Centre – all bass-reflex designs featuring the same 1in titanium tweeter and 5.25in long-throw bass/mid-range drivers (one in the B5, two in the T5 and C5). An Image 5 5.1 package, including the Subsonic 5i subwoofer, will set you back around £1,500.



## 7-channel line-up



Pioneer Europe has announced five AVRs that should be in the UK as you read this. Described by the

company's Philippe Coppens as 'our strongest line-up in years', the range includes the 7.1-ch VSX-1021 (pictured) and VSX-921, alongside VSX-821, VSX-521 and VSX-421 5.1-channel models. All five new AVRs come with a free USB/video cable for iPhone, iPad and iPod Touch enabling fast 'plug and play' video and audio capability with no optional dock required. The two DLNA v1.5-certified 7.1 AVRs offer vTuner Internet Radio and AirPlay functions.

[www.pioneer.eu/uk](http://www.pioneer.eu/uk)

## Loewe's 3D plan



Loewe is finally joining the 3D battle with a lineup of active shutter 3D Individual Compose televisions. First out of the gate is a 46in model (from approx £4,100), with 40 and 55in sets due to follow shortly. As well as displaying native 3D content from Blu-ray and set-top boxes, the TVs also feature integrated 2D-3D conversion.

They also come equipped with Loewe's MediaPortal network functions and MediaNet online services, and available in a choice of high gloss white, aluminium black and silver finishes.

[www.loewe-uk.com](http://www.loewe-uk.com)

## Alloy-there!



Acoustic Energy has added a 'bigger, bolder' flagship speaker to its acclaimed Neo range. The floorstanding Neo 4 will set you back around

£700 per pair and marries

a triple-ported 70lt cabinet with the company's 1.5in dual ring radiator tweeter and signature 5.25in aluminium alloy mid-range driver. The three-way speaker also features a pair of 6.5in bass drivers with AE's ultra lightweight piston aluminium alloy cones. The Neo 4 is also available as part of the Neo Max 7.1 speaker package, priced around £1,900.

[www.acoustic-energy.co.uk](http://www.acoustic-energy.co.uk)

## Playlist...

Team *HCC* reveals its Playback picks of the last month

### HR Giger Revealed (R2 DVD)



Captivating doc on the gothic world of the Swiss surrealist artist and designer of *Alien*. *CJ*

### The Godfather (Film4)



Revisiting Coppola's crime drama reminds me that they just don't make 'em like this any more. *MC*

### The Social Network (All-region BD)



I'm re-watching it with the subtitles turned on, so as not to miss any of Sorkin's script. *JL*

### Crysis 2 (Xbox 360)



Mixing incredible graphics and phenomenal gameplay, Crysis 2 delivers the explosive shot in the arm the first-person shooter genre desperately needed. *AvB*

### Archer: The Complete Season One (R2DVD)

This toon is even crazier on DVD thanks to an alternate pilot starring a screeching dinosaur as the secret agent. *JR*



# Music industry set to fragment

...but Sonos welcomes this as it launches Android app controller

Wireless multi-room music company Sonos has released a System Controller app for Android users and issued a firmware update that brings Apple AirPlay compatibility to its hardware.

The free Android app follows on from the release of similar control apps for iOS, and effectively turns any Android mobile into a Sonos Controller.

'It gives people another great way to control their music,' says Craig Wisneski, the brand's senior product manager. 'It looks similar to our iOS app, but there are a few changes. The most obvious one is that we can use the hard buttons on the Android device for volume, which we can't do with the iPhone. It's a simple thing, but really makes a difference. There's one other neat feature. For Android we were able to use Google Voice Search. So, if you don't want to bother typing out the name of the band, and hit the microphone button and say "Springsteen", the system then finds the artist.'

While Sonos doesn't have a version for Android tablet devices, it's only a matter of time. 'We're dedicated to continued development on the Android platform. It's certainly obvious in the



**Wisneski, Sonos, snr. product manager:** firmly believes the Android 'is here to stay'

market that Android is here to stay,' says Wisneski.

Compatibility with Apple AirPlay brings extra functions to the platform. By placing an Apple Airport Express (typically around £80) via line-in to any Sonos ZonePlayer, you can use AirPlay to send music from an iOS device to any connected Sonos multi-room system.

Sonos doesn't see AirPlay as competing technology. 'Our position is that it's just another great source of music and we're going to be all over it,' says Wisneski.

'Our Mesh network wireless technology is much more stable than anything you will get with an AirPlay solution. There's no dropout. It's rock solid. You can stream music from the internet, from your hard drive, from a NAS or Apple Time Capsule.'

### No discs, no wires

Craig Wisneski believes that such added convenience can only hasten the death of packaged media, but he maintains that this is good news for music lovers.

'I think that as a result we're going to listen to more music than ever before,' he says. 'We are moving from CD domination to total fragmentation. We can now enjoy On Demand streaming services, such as Spotify and Napster, as well as Smart Radio services such as Last FM. Then there's sharing – when you combine your Spotify account with your Facebook account and you see all the music your friends are listening to. You can send each other playlists, just like the old mix tapes, which you could send to hundreds of people at the same time. We're moving to an era of music discovery tools.'



Hard buttons work well on the Android



## Talkback

Team HCC reveals its thoughts about the home cinema market



Luckily for me, I'm not a member of the PlayStation Network or Sony's Qriocity service, so I've been sleeping easily at night. However, if I was, I'm still not sure I'd be directing my ire at the Big S, as many online voices have been. While Sony is obviously at fault for allowing its security to be compromised, I've yet to meet anyone laying the blame on the hackers themselves, who are the real villains of the piece. So, while I still won't be signing up to Sony's online network any time soon, I'm not going to rush out and trade my PlayStation 3 for an Xbox 360, either. **MC**



In my opinion, the Sony breach has demonstrated that there is still an incredible amount of work to do before these kinds of digital supply systems are both completely secure. As such, I don't think I'll be ditching my Blu-ray collection any time soon – because when this happens again, and those who have completely eliminated physical media from their lives are stuck watching broadcast episodes of *EastEnders*, I'll be throwing another disc from my physical media collection on my home cinema system to enjoy exactly when I want to, without unwanted interruptions. **AvB**

# PlayStation Network hacked

Attack is expected to prove costly for tech giant, Sony

'As a company we, and I, apologise for the inconvenience and concern caused by this attack.' These were the words of Sony CEO Howard Stringer speaking some two weeks after an attack by hackers forced the global tech giant to suspend its PlayStation Network and Qriocity online services, leaving users to fear the worst about the security of personal information stored in their accounts.

Users first became aware of the problem in the second half of April when the PlayStation Network and Qriocity services both went down with no explanation. Rumours swiftly started flying about the possibility of a security breach, but it took Sony a week to release an official statement explaining that it had become aware of 'an illegal and unauthorised intrusion into our network' between April 17 and April 19, and confirming that during this time 'user account information was compromised'. The announcement, sent to press and users alike, went on to state that 'we believe than an unauthorised person has obtained the following information that you provided: name, address, country, email address, birthdate, PlayStation Network/Qriocity password and login, and handle/PSN online ID... While there is no evidence that credit card data was taken at the time, we cannot rule out the possibility.'

In the UK alone that amounted to some three million PSN users, all of whom could have had credit card details (and more) stolen. Speaking to HCC's



Sony's CEO **Howard Stringer** apologetic after the hack left users vulnerable



sister website, TechRadar, Graham Cluely from security specialist Sophos had one simple piece of advice for anybody who had entered their credit card details on the service: 'cancel that card immediately'. But even this proved problematic for some users we spoke to who have more than one credit card and, thanks to the service being down, couldn't find out which one to cancel.

According to some analysts, the cost to Sony of the PlayStation Network hack is already being estimated to be in the region of \$1.5billion (roughly £0.9billion) through a combination of lost business, compensation and rebuilding the services and related security systems. Indeed, shares in the company dropped nearly five per cent immediately after the widespread publicity about the hack.

## Loss of trust

Another concern for Sony must surely be the long-lasting issue of public trust in the company. A poll of more than 2,000 people undertaken by TechRadar found that 55 per cent of respondents had apparently lost faith in the brand.

**Breach:** Qriocity services were effected too



## Alien attack



Earth comes under threat from alien invaders once again on July 11 when Sony Pictures unleashes

the sci-fi blockbuster *Battle: Los Angeles* on DVD and Blu-ray in the UK. The DVD will offer six behind-the-scenes featurettes (*Behind the Battle*, *Building the Aliens*, *Acting with Aliens*, *Shooting the Aliens*, *Preparing for Battle* and *Creating LA in LA*), while the BD will reportedly offer up an additional 16 featurettes (including the likes of *The Freeway Battle*, *Alien Autopsy* and *Do You Believe in Aliens?*) and a PS3 theme to give your console a makeover! [www.sonypictures.co.uk](http://www.sonypictures.co.uk)

## Leeson searches on



Fresh from cutting a bloody swathe of destruction through the streets of Paris in *Taken*, Liam Neeson

is now causing chaos on the streets of Berlin in director Jaume Collet-Serra's twisty-turny suspense thriller *Unknown*, which finds him searching for something even more personal than his abducted daughter – his identity. Optimum Home Entertainment is bringing the film to DVD and 'Triple-Play' Blu-ray in the UK on July 18 with extras including the featurettes *Unknown: What is Known?* and *Liam Neeson: Known Action Hero*. [www.optimumreleasing.com](http://www.optimumreleasing.com)

## Droid and tested



Lucasfilm and 20th Century Fox have finally spilled some more beans about what we can expect

from the *Star Wars* Blu-rays. Arriving in the UK on September 12, the nine-disc *Star Wars: The Complete Saga* features new 1080p presentations of the six films with DTS-HD MA 6.1 audio, plus two audio commentaries for each film, interviews, deleted/extended/alternate scenes, concept art, a trio of archival *Making of* featurettes, a look back at *The Empire Strikes Back*, a 90-min collection of *Star Wars* spoofs and an 84-min tribute to 'costume enthusiasts'. [www.fox.co.uk](http://www.fox.co.uk)

## Dark age of Cage



Nic Cage joins forces with cult favourite Ron Perlman and *Misfits* star Robert Sheehan to battle

the forces of evil in the medieval action-adventure *Season of the Witch*. The trio embark on a dangerous journey to escort a young woman, accused of witchcraft, to a monastery where she will stand trial for causing a plague that blights the countryside. Arriving on DVD and Blu-ray in the UK on June 27, the only extra feature confirmed for either so far is a *Making of...* featurette, but the studio also promises 'eye-catching 3D lenticular' packaging. Woo-hoo! [www.momentumpictures.co.uk](http://www.momentumpictures.co.uk)



# Bourne to run

The Adjustment Bureau → Universal Pictures → R2 DVD & All-region BD



Matt Damon and Emily Blunt fight for their fate in the sci-fi thriller *The Adjustment Bureau*. Based on a short story by Philip K Dick, the film stars Damon as a successful politician who falls for Blunt's aspiring ballerina. Trouble is, the agents of the mysterious Adjustment Bureau will stop

at nothing to make sure their relationship goes nowhere...

Arriving on July 11, the DVD offers a commentary, deleted/extended scenes and three featurettes, while the BD adds *The Labyrinth of Doors: Interactive Map of New York* and Pocket BLU functions.



## Premiere

HCC's guide to what's happening in the world of TV and films...

### Slaving on new script

Fan favourite Quentin Tarantino has started work on a new script. Titled *Django Unchained*, it focuses on a freed slave-turned-bounty hunter trying to liberate his wife from the clutches of an evil plantation owner.

### Back from the dead



Christopher Lloyd, Ving Rhames and Paul Scheer have all signed on to reprise their roles in this year's eagerly anticipated horror sequel,

*Piranha 3DD*. This is quite surprising, as we're pretty sure that at least one of them died in *Piranha 3D*, while another just disappeared towards the end of that flick.

### Glucose shock

Arnie has revealed that he'll be making his post-Gubernator return to the big screen as a down-on-his-luck horse trainer, hired to kidnap a nine-year-old boy in the drama *Cry Macho*. According to producer Al Ruddy, 'There's a sweetness to Arnold in real life, and we want to bring that sweetness to the screen'.

# HCC honours Awards winners

2011 Best Buy awards celebrated

*Home Cinema Choice* honoured the winners of its 2011 Best Buy Awards at a stylish event on May 4th.

The exclusive winners' party saw guests representing the successful companies assembling in London's opulent Soho Hotel, to enjoy a gourmet lunch and the presentation of the coveted 'starman' statuettes.

HCC Publisher, Pat Eggington, welcomed representatives from Sony, Samsung, Panasonic, Onkyo, Denon, KEF and a host of other big names (and some not so big), for what was a unique opportunity for the industry to get together, celebrate its achievements and to gossip about the ups and downs of the year.

HCC Editor, Chris Jenkins, said the last year had seen fascinating innovations in home

entertainment technology, such as 3D and smart devices. But he emphasised that, despite the industry's expected shift towards media downloading, the Awards continued to focus on performance and design excellence, as well as value for money.

The Awards featured 22 categories including TVs, Blu-ray players, digital recorders, AVRs, speakers, projectors, and media players, and this year there was also an Award for Best Accessory, which went to Optoma for its innovative 3D-XL projector converter. Honouring the work of custom home cinema installers, this year's Installer of the Year Award went to Essex-based Cinema Rooms. You can find a



complete list of winners on the HCC website.

Best Disc Award went to 20th Century Fox Home Entertainment for its *Avatar Collector's Edition*. Fox's Liz Silverstone had a busy day, as the date also marked the launch of the company's marketing campaign for the *Star Wars* Blu-ray release, 'May the 4th be with you'.

At the end of the presentations, the winners enjoyed a few words from guest of honour, Ken Ishiwata of Marantz. A legendary figure in the field of amplifier and speaker design, Ken was a long

overdue recipient of the HCC Hall of Fame Award. Flying in specially from Germany, Ken said that receiving the award sounded like he was a baseball player announcing his retirement, but he had, in fact, just signed a contract to continue his association with Marantz.

In an absorbing speech, he explained that electronic design has to be as much about heart and soul as it is about technical aspects. His approach to 'tweaking' sound performance is always based around the emotional response to sound.

You can find more about the *Home Cinema Choice* 2011 Best Buy Awards Winners event at [www.homecinemachoice.com](http://www.homecinemachoice.com).



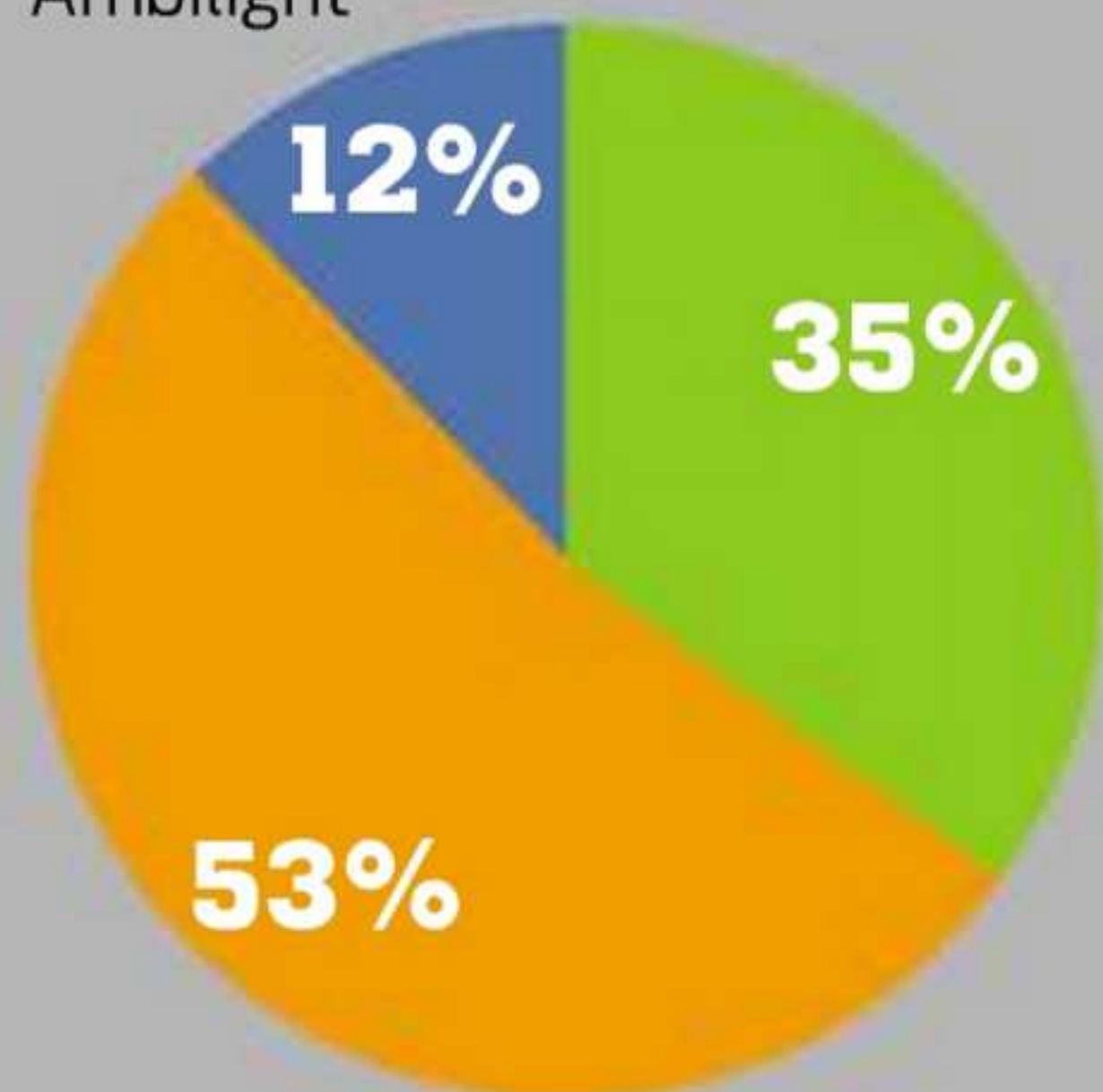
**Ed Chris Jenkins with:** Ken Ishiwata (above) and Amber Palumbo (below L) and Liz Silverstone (below R), both from 20th Century Fox Home Entertainment



## We asked...

How do you feel about Philips no longer manufacturing TVs?

- Heartbroken, I love its TV tech
- Not bothered one way or the other
- Overjoyed – I never liked Ambilight



Results from [www.homecinemachoice.com](http://www.homecinemachoice.com)  
Go online for more polling action

## 3D rescaler arrives



ViewSonic is bringing a video processor that enables users of the company's 3D-ready DLP Link

3D/120Hz projectors to enjoy stereoscopic content. Dubbed the VPD31, this £300 black box features dual HDMI v1.4a inputs and an HDMI v1.3 output and ships with a pair of the company's second-generation PGD-250 3D glasses. 'Unlike a TV, the VPD31 and projector solution is scalable, enabling users to enlarge a 3D image to any size without losing any quality at all,' states European product manager Trevor Holt. [www.viewsonic.com](http://www.viewsonic.com)

## The Dutch ditch



Dutch consumer electronics brand Philips has announced that it is offloading its ailing

TV division. Remarking that it seeking a 'return to profitability', the company is transferring its TV business to a joint venture with Chinese monitor manufacturer TPV. Philips will retain a 30 per cent stake in the business, with an option to sell those remaining shares to TPV in six years. Does this mean no more 21:9 ratio TVs? Only time will tell, as Philips claims that all staff working on its TVs will go across into the new venture from January, [www.philips.co.uk](http://www.philips.co.uk)

## Sim2's triple flash



While adding some style to the world of home cinema (see p7), SIM2 is also about to unleash its

first single-projector 3D solution in the UK. The 3-chip Lumis 3D-S is the only consumer projector to use triple-flash technology in conjunction with active shutter 3D delivery – triple flash is a system developed for commercial cinemas to eliminate the flicker and ghosting associated with active shutter tech. Prices for the Lumis 3D-S projectors start at a reassuringly expensive £30,000, including two pairs of XpanD glasses. [www.sim2.co.uk](http://www.sim2.co.uk)



This month's top 10 news stories in handy, bite-sized chunks...



Four legs good in 3D for Cameron

## 1 Concern about image

James Cameron believes that Hollywood is losing ground to TV by opting to focus its attention on greater image resolution rather than higher frame rates. In a recent industry presentation, the outspoken director stated, 'The broadcast industry is pulling away from the movie industry on frame rates. The movie industry is too focused on spatial resolution.'

## 2 More TVs

A new global study undertaken by research group, DisplaySearch, has found that owners of flatscreens in developed countries own 30 per cent more TVs per household than owners of other types of display device. This number rises in emerging countries, coming in at 37 per cent. It also discovered that the UK and Japan have been the most active countries in replacing TVs over the past three years.

## 3 R.I.P.

The AV industry lost two legends in April. Harman/Kardon co-founder Sidney Harman passed away in the middle of the month, aged 92, followed only a week later by former Sony president and 'father of CD' Norio Ohga, who was 81.

## 4 3D mammoth

Clearly agreeing that 3D works best on a big screen, Samsung has just launched the world's largest 3D Smart TV in Korea. The 75in D9500 Series 240Hz display comes with a QWERTY flip remote for easier net navigation and four sets of active shutter glasses. All of which will set you back the equivalent of around £11,000.

## 5 Fox picks up catalogue

Troubled Hollywood studio, MGM, has renewed its worldwide DVD and

Blu-ray distribution agreement with 20th Century Fox through 2016. As well as MGM's huge catalogue of titles, the deal also includes the home entertainment release of the next Bond film, despite the fact it is being co-financed and distributed theatrically by Sony.

## 6 Everything digital helps...

Tesco has acquired an 80 per cent stake in movie streaming company Blinkbox. According to Tesco CEO Richard Brasher, 'the acquisition of Blinkbox, together with a range of other services currently in development, means we can link physical purchase of a product to the building of digital collections in a new and seamless way.'

## 7 Big up for B&O

Bang & Olufsen is the latest AV manufacturer to serve up some super-size, high-end 3D plasma TVs. Available in a choice of 85 and 103in screen sizes, there's been no price confirmed yet – but we doubt the target market worries about such things.

## 8 Double oops!

HCC #193's news story about PMC's PB1i Signature speakers wrongly listed the price as £2,500 per pair. It should have read £7,300! Also, Panasonic's TX-

P50GT30B review in HCC #195 should have credited the TV with a Five Star Best Buy Award. Apologies for both errors – the offending droids have been melted down.

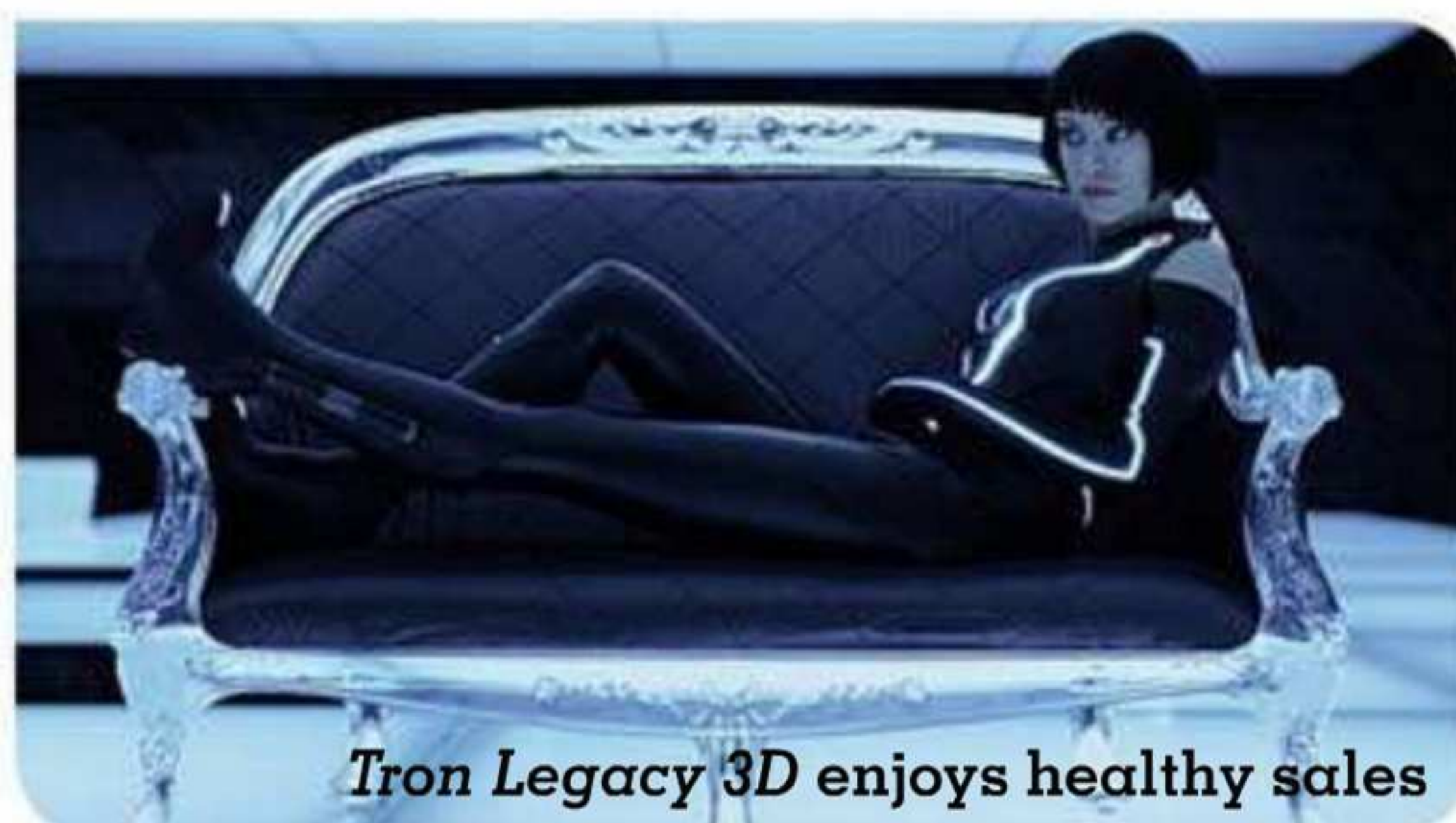
## 9 Fewer TVs

According to a report by Nielsen, for the first time since 1992 there will be a year-over-year decline in the number of US households with a TV. The research indicates that the number of households with a TV will drop from 115.9million (98.9 per cent) this year to 114.7million (96.7 per cent) in 2012.

## 10 Record breaker

The hi-def release of *Tron: Legacy* has been breaking records on both sides of the Atlantic. The film set a new market share record in the US with 68 per

cent of its disc sales coming from Blu-ray. Meanwhile, here in the UK, Amazon has revealed that the 3D Blu-ray received 40 per cent more pre-orders than the DVD and twice as many as the regular 2D Blu-ray.



Tron Legacy 3D enjoys healthy sales

## Web chat

Sony's PSN problems got people thinking about physical vs cloud media on the HCC website...



## Weakest link

'There are plenty of problems with Sony's services. For starters, no one can develop the greatest security protection in the world that no hacker can infiltrate, because Godel's Incompleteness Theorem forbids it. Also, the service itself doesn't have to be hacked to be unusable; any link in the chain between you and it (eg. your ISP) can fail or be hacked instead. It only takes one.'

## I love shiny things...

'I like having something shiny in my hand. True, my disc collection could go up in flames or get nicked, and I realise the lack of logic here, since I often trust my credit card details to Amazon or Play. But they send me something shiny! The thing is, when it comes to Sony, we all have the right to expect so much better and they have failed big time, compounded by a tardy response.'

## Potential problems

'If providers could change cloud-based content, would that mean an original version of *Star Wars* would be automatically changed to the new 'improved' versions. Could the government of the day decide you may no longer watch certain things? And what about 'lifetime-only' ownership? Who gets the rights to view all the media after the original owner has died? You can't pass it on like your DVDs.'

## Physical media

'I have spoken with friends who are well into cloud technology and whatever else is new. But I have always said you cannot beat owning your own physical copy – be it DVD, Blu-ray, LP or even cassette. I personally do not own any MP3/iPod-type files, as I don't see the point in spending money on inferior sound quality'



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# HDR-FOX T2

Beauty is in the eye of the viewer...

## Glorious HD, digital recording, catch-up services and home networking

The Humax HDR-FOX T2 puts a world of content at your fingertips.

Freeview TV and radio channels, glorious HD programmes, plus live pause, instant rewind and digital recording features that put you firmly in control of your viewing – all subscription free!

But the HDR-FOX T2 is much more than a digital TV recorder. Simply connect to your home network to launch the new Humax TV Portal – a gateway to a host of catch-up and on-demand TV, plus internet services.

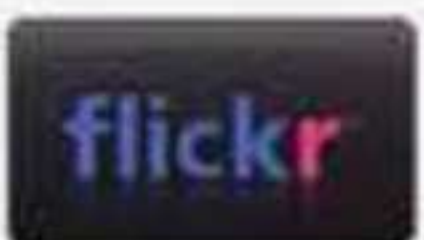
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\*To find out if Freeview HD is available in your area, visit [www.freeview.co.uk/HD](http://www.freeview.co.uk/HD)





# POINT OF VIEW

As the days get longer and lambs frolic in the fields, a young man's thoughts turn to spring-cleaning his AV system, says **Richard Stevenson**

Right now, I sit among the Bluebells and awakening landscape, thinking about the spring lambs in the field next door. (Mostly with mint sauce and garlic mash). It is a time of renewal, rebirth, green shoots, and a host of other nebulous metaphors I usually wheel out at this time of year to justify spending on some new home cinema kit. Sadly, the fickle whim of fiscal fate has left everyone's pockets bare after 'worse-off Wednesday'. This year I will have to be content with a spring clean and a little system fettling instead.

It's amazing what a kit strip-down and rebuild can uncover. Among the welcome £2.43 in loose change, lost by some manufacturer's rep down the back of the sofa, I recovered the Blu-ray disc of *Repo: The Genetic Opera*, a small eBay fortune of redundant cabling and an integrated amplifier that I could have sworn I had sent back to its rightful maker. I suspect the *Repo* disc was jammed behind the equipment rack by the missus, shortly after I announced that I am now of an age where I find Sarah Brightman seriously hot.

My kit is disconnected and reconnected almost weekly, but those who either fiddle with their system or don't touch it for years are likely to get more mileage from it after a proper spring clean. Take my very good friend (and *HCC* reader), who shall be known simply as Robin. A while back, he 'moved his kit around and reconnected everything' and then installed a new TV. Things were apparently not sounding right and my presence was summarily requested to sort things out, lured by the bait of his rather fine cooking.

As was the norm, I expected to stretch out some gentle picture fettling and EQ tuning over about five courses and at least one bottle of his best Rioja. However, from simply running an auto setup it was clear that speakers were connected to the wrong outputs, some were out of phase, others had treble and no bass, or vice versa, and

some were simply silent. I am pretty sure that dialogue emerging from just behind your left ear is not how any director intended.

He had moved his Onkyo receiver into a tight cabinet so it was overheating, shortened the cables so you couldn't pull it out and then mounted a 47ins plasma into a cabinet above, effectively sealing everything in place. The entire front end was running off one over-stretched mains socket, and many of the bare wire speaker cable connections had come adrift and were shorting out. Not bad for a Health & Safety Manager...

## Brighter Brightman

I still need to go back and sort that out, probably with Japanese cuisine and one of the bottles of Chablis I spotted in his rack. The take-home message from this sorry tale is that **if you are disposed to perform equipment and furniture acrobatics blindfolded, then your system will almost certainly require serious attention.**

And even if you haven't moved it for months, some regular care and maintenance will ensure it is performing at its very best. Tidying up tangled cables, cleaning and remaking all connections and a ground-up run-through of the auto setup will deliver peak sonic performance. For the picture, invest in some calibration discs, clean projector filters regularly and buff the lens with an approved photographic cloth. Even simply dusting your screen can reveal long forgotten image detail.

While the upgrade wrought by this TLC is unlikely to be on the same scale as buying a new 3D projector or upgrading to a cutting-edge AV receiver, one can but dust and dream... mostly of lamb chops and Sarah Brightman ●

How often do you rearrange your AV kit?  
Let us know by e-mailing [hcc@futurenet.com](mailto:hcc@futurenet.com)

**Richard Stevenson** manages to stay earthed by wearing latex gloves, but after a few glasses of Rioja he tends to forget...







# DVD ADDICT

**The Beek** bemoans the loss of any intelligent TV programmes about cinema and their replacement with plugs for Hollywood blockbusters

**L**ike any self-confessed cinephile, I regularly experience a feeling of disappointment when going through the TV listings, on account of the paucity of quality programming about cinema itself.

Discounting the rare documentary or filmmaker-related season (often arriving to celebrate the subject's work only when they're dead) that pops up once in a blue moon on digital and satellite channels such as BBC Four, More4 or Sky Arts, television seems reluctant to engage with cinema in any meaningful way. Sure, that BBC mainstay *Film xxx* is still around, with a new host and format, but it's been a very long time indeed since it provided much more than free ads for the latest Hollywood blockbusters, as the presenters run through what's opening at the box office this week and nip across to a press conference to solicit a few precious minutes with some A-list stars.

## Slim pickings

If you're looking for something more stimulating than the BBC does offer a couple of other choices. With regular segments hosted by the entertaining and cine-literate duo of Mark Kermode and Simon Mayo, *The Culture Show* certainly digs a little deeper into the subject and does a reasonable job of shining a light on films that don't necessarily fit the mainstream – but given the amount of other topics it has to compete with in each episode, these segments often feel like little more than a primer, lacking in-depth discussion. Likewise, *The Review Show* only finds time to look at one film per week, and then compounds the problem with a revolving door of guests who spend most of their time trying to sound superior and more intelligent than the people around them, forgetting to actually engage with the audience.

How different it was when I was growing up. Between 1988 and 1994 my guide and tutor was independent filmmaker, Alex Cox, host of BBC2's cult film series *Moviedrome*. Each week saw him introducing viewers to another cinematic oddity or forgotten masterpiece, setting the scene for the film with a fascinating discussion of its history, themes and social context. This is where my generation first encountered *The Wicker Man*, *The Last Picture Show*, *The Long Riders*, *Sunset Boulevard*, *Kiss Me Deadly*, *Girl on a Motorcycle*, *Carnival of Souls*, *Django*, and the sublime double-bill of *Alligator* and *Q: The Winged Serpent* – the latter a prime example of how this show respected the kind of films that would be dismissed as sheer exploitation elsewhere.

Between 1991 and 1996 BBC2 also offered the sublime *Moving Pictures*. Hosted by *Rock Follies* creator Howard Schuman, **the magazine programme was dedicated to all aspects of cinema** from laser-disc editing with Bernardo Bertolucci, to the making of John Woo's *Hard Boiled* (at a time when he was little known in the UK), to a look at depictions of sex in Chinese cinema and an interview with Jan De Bont on the set of *Twister*. Small wonder, then, that Quentin Tarantino told John Travolta that it was the best series about movies on TV, during his interview for the show about the making of *Pulp Fiction*.

But it seems that these days, despite the ever-expanding number of channels available, there simply isn't a place on TV for this kind of in-depth and illuminating coverage of all facets of cinema. Instead, we just have to make do with anodyne programmes that big up the already heavily promoted cinema mainstream ●

*Do you miss knowing more about filmmaking?  
Let us know: email [hcc@futurenet.com](mailto:hcc@futurenet.com)*

**Anton van Beek** has watched far too many Korean zombie movies and now refuses to sleep or open any windows as a result





# Tech diary

The world of AV and film changes fast. **Our calendar** ensures you don't miss out

**True Grit:** Jeff 'The Dude' Bridges is truly gritty in the Coen bros' remake



Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
				<b>3</b> <b>Senna</b> UK-based Formula One fans should hit cinemas today for this documentary about the life and death of the legendary motor-racing champion Ayrton Senna <a href="http://www.universalpictures.co.uk">www.universalpictures.co.uk</a>		
<b>6</b> <b>127 Hours</b> A film about a man trapped under a rock sounds dismal, but director Danny Boyle has made this real-life story truly gripping. Snap it up on DVD or BD in the UK from today <a href="http://www.fox.co.uk">www.fox.co.uk</a>				<b>10</b> <b>Kung Fu Panda 2</b> This sequel finds the fate of kung fu hanging in the balance when China's new emperor unveils his secret weapon. Can Po and the Furious Five stop him? Find out in UK cinemas this Friday <a href="http://www.paramountpictures.co.uk">www.paramountpictures.co.uk</a>	<b>11</b> <b>InfoComm 2011</b> More than 950 exhibitors from the world of AV communications will be showcasing their latest products and services at this tech-heavy trade show held in Orlando, Florida <a href="http://www.infocommsho.org">www.infocommsho.org</a>	<b>12</b> <b>Technicolor chiller</b> Paramount Pictures made history on this day in 1939 when it began shooting <i>Dr Cyclops</i> , the first horror film ever photographed in three-strip Technicolor
<b>13</b> <b>True Grit</b> The Coen Brothers' adaptation of Charles Portis' 1968 celebrated western novel takes its bow on DVD and Blu-ray in the UK today. So saddle up and round up a copy for yourself <a href="http://www.paramountpictures.co.uk">www.paramountpictures.co.uk</a>			<b>16</b> <b>R.I.P</b> Director Nicholas Ray passed away due to lung cancer on this day in 1979. A favourite of filmmakers Martin Scorsese and Jean-Luc Goddard, Ray is probably best known for the James Dean film <i>Rebel Without a Cause</i>	<b>17</b> <b>Green Lantern</b> Ryan Reynolds is back, taking centre stage in this FX-packed blockbuster based on the popular DC Comics series. Look for it in 2D and 3D at cinemas across the UK from today <a href="http://www.warnerbros.co.uk">www.warnerbros.co.uk</a>		
<b>20</b> <b>I Am Number Four</b> This teen sci-fi extravaganza explodes arrives on UK DVD and Blu-ray accompanied by an intro from director DJ Caruso, six deleted scenes, plus a Becoming Number Six featurette. <a href="http://www.disney.co.uk">www.disney.co.uk</a>			<b>23</b> <b>Happy Birthday!</b> Special effects legend Kevin Yagher (creator of the Chucky doll for <i>Child's Play</i> and Freddy Krueger's makeup in the second, third and fourth <i>Nightmare on Elm Street</i> films) turns 50 today	<b>24</b> <b>Bad Teacher</b> Fan favourite Cameron Diaz gets raunchy and rude at cinemas today, playing a foul-mouthed teacher in this new comedy from <i>Walk Hard</i> director Jake Kasdan <a href="http://www.sonypictures.co.uk">www.sonypictures.co.uk</a>		
<b>27</b> <b>Akira</b> At last – the legendary anime classic gets its UK Blu-ray release today. While there's no word yet on possible extras, we're expecting great things from the remastered picture and soundtrack <a href="http://www.manga.co.uk">www.manga.co.uk</a>	<b>28</b> <b>Home Technology Event</b> CEDIA's UK trade show returns to London's ExCel for another three-day series of demonstrations and seminars dedicated to AV and smart home applications <a href="http://www.hometechnologyevent.com">www.hometechnologyevent.com</a>	<b>29</b> <b>Television Centre</b> After six years of construction, the BBC finally unveiled its £12million 'Hollywood of the small screen' (better known as the Television Centre in London's Shepherd's Bush) on this day in 1960	<b>30</b> <b>HCC #197</b> Your favourite home cinema magazine hits the stands this Thursday, packed to the gills with hardware tests, features, outspoken opinion and full-on software reviews <a href="http://www.homecinemachoice.com">www.homecinemachoice.com</a>			



18 FOR YOUR REFERENCE...

# Demo screen

**X-Men 2** turns your home cinema into a genuine AV superhero. Let Nightcrawler show you how...



## X-Men 2

20th Century Fox Home Entertainment → All-region BD → £20 Approx

**Time code:** 001.50-005.18

It's one thing to passively sit there and watch a superhero film unfold on a screen in front of you. It's another thing altogether for a film to actually make you feel like a superhero. But that's exactly what Bryan Singer and his team achieved with the opening scene of his 2002 blockbuster sequel *X-Men 2*, when rogue mutant Nightcrawler (played by Alan Cumming) uses his talent for teleporting in order to invade the White House and try to assassinate the President.

At the end of the day, this kind of teleportation trick is as old as cinema itself. First they shoot the scene with Nightcrawler in it. Then the cameras are turned off,

Nightcrawler exits stage right and the cameras are turned back on again. We've all seen it a thousand times before. So why is it so incredibly effective here? And what makes it such a show-stopping piece of home cinema on Blu-ray?

Well, it certainly doesn't hurt that the AVC 2.40:1 1080p encode is meticulously detailed, robustly coloured and works wonders with the film's sensational special effects – particularly the 'bamf' teleportation effect developed by VFX supervisor Mike Fink, which leaves ethereal trails of smoke following in Nightcrawler's wake. But as good as the sequence looks in hi-def, it sounds even better thanks

to the platter's incredible DTS-HD Master Audio 5.1 mix.

Whether it's traditional effects such as bullets panning across the soundfield, the more playful and dynamic acoustics that accompany Nightcrawler as he quickly flits from place to place attacking guards, or even just the beautifully rich presentation of the Dies Irae movement from Mozart's *Requiem in D Minor* that underscores it all, the entire scene is an audio *tour de force*.

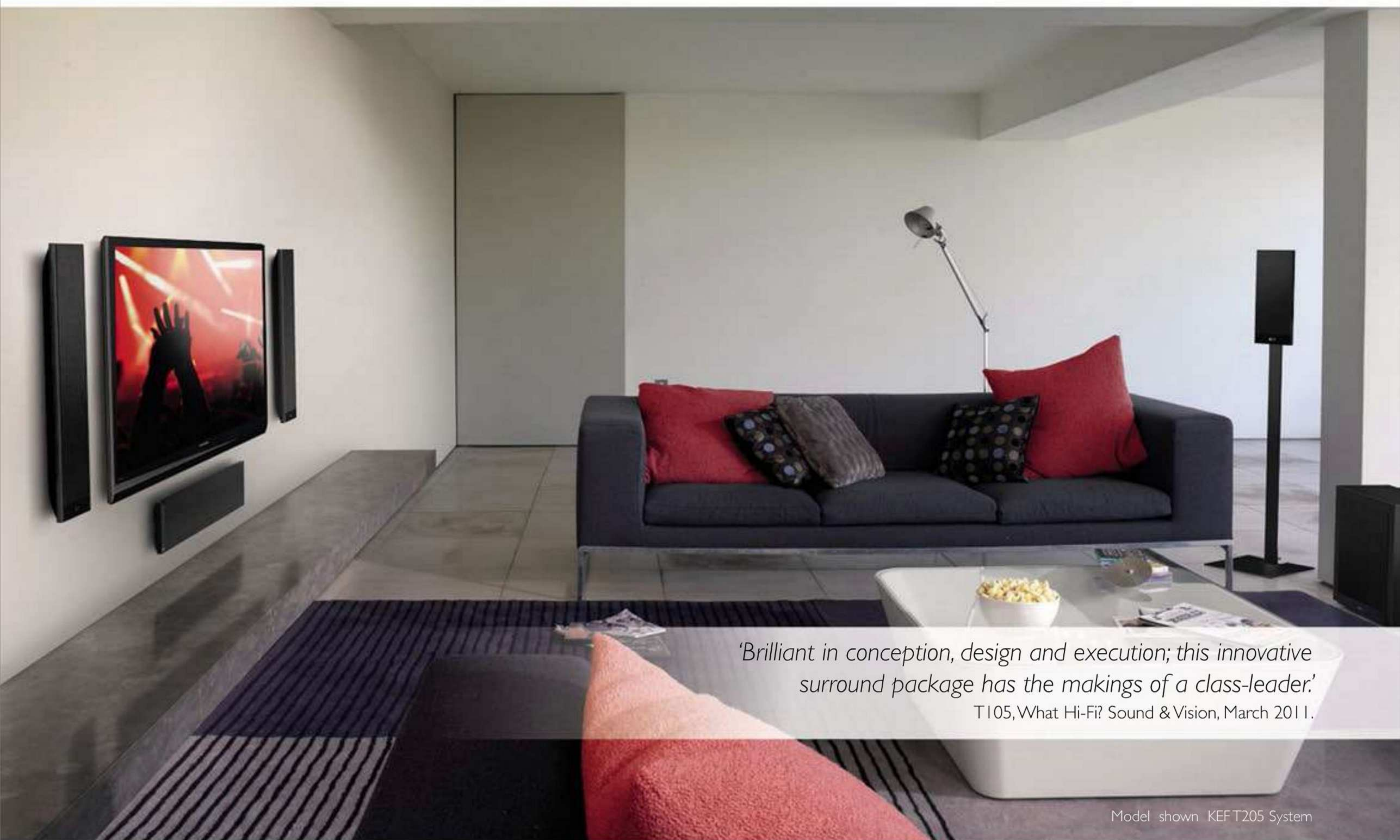
'This scene was meant to wow people,' claims director Bryan Singer, and it's safe to say it easily met that goal in cinemas. Thanks to Fox's well-crafted Blu-ray, it continues to do so in our homes, too ●





## T Series

# slim speakers, serious sound



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T105, What Hi-Fi? Sound & Vision, March 2011.

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# Winning Ways

CEDIA's annual Awards honour the best in custom home cinema installation. We take a look at some of the most mouth-watering 2011 finalists...

Every year, the good folk of the Custom Electronic Design and Installation Association (CEDIA) honour the installers and projects they believe represent the best in the business.

CEDIA Zone 1 takes in Europe, Africa, parts of Asia and the Middle East, so the competition is wide and hard-fought. A distinguished panel of judges this year included *HCC*'s former editor and regular contributor Steve May.

For CEDIA members, this chance to honour the best in the industry culminates in a gala awards evening in London, hosted this year by Trevor Eve. For *HCC* readers, it's a chance to drool over some



amazing projects we might not be able to afford, but can aspire to.

Of course, there's much more to CEDIA's work than home cinema, and many of the categories include features such as multiroom audio, household automation, security and communications. But you'll excuse us for concentrating on the most impressive picture-palaces designed to deliver movie and TV entertainment at the peak of technological and design expertise.

So, go ahead and enjoy our look at a selection of the CEDIA Zone 1 winners and finalists; and let's hope they give you some award-winning ideas for your own home cinema systems...



## Best Home Cinema over £100,000

**Finalist: Sphere Custom – House Khoury**

This South African project aimed to improve on an existing system during an extended home refurbishment. Requesting a good value, state-of-the-art system, the client wanted a media server, Blu-ray player and surround sound system simple enough to be used by a large family.

Sphere Custom specified a Cineversum Blackwing projector beaming onto a massive 4.2m wide curved, acoustically transparent anamorphic screen, accompanied by an anamorphic lens, 3 x 1800W multichannel power amps driving a 7.3-channel Artcoustic Spitfire Sound system, an Integra DHC80.3 processor, and a Cambridge Audio multi-region Blu-ray player. Control over the system is achieved using a Crestron TPMC-6x touchpanel.





### Best Home Cinema under £40,000

#### Winner: The Big Picture – The Junk Room

Taking a good-sized garage being utilised for junk storage, The Big Picture crafted a stunning home cinema with as much of the client's existing equipment as possible. With a gaming and TV room already in the house, the junk room could be dedicated to cinema use. So, taking existing Lutron lighting hardware, projector and Blu-ray player, the company went for a discreet design with largely hidden features, including bricked-up windows, radiators recessed into alcoves, a concealed entrance door, heavy curtaining, and a small vent for the projector.

The front wall behind the speakers is open stud work covered with Rockwool, while all other walls have a minimum 400mm depth of Rockwool for heat insulation and sound absorption.

Equipment includes a 2.9m custom aluminium acoustically transparent screen, with B&W speakers placed behind it at ear level, and two 12in Velodyne subwoofers.



### Best Home Cinema £40,000 - £100,000

#### Finalist: FAB Audio Visual – Lofty Ambitions

Working for an avid movie-watcher who had spent six years renovating his property, FAB AV installed this loft project designed to seat three people in comfort. Specifying no unnecessary distractions, the client went for a wide screen, a projector fitted with an anamorphic lens and a 7.1 sound system.

Stud walls were constructed at each end of the room and isolated from the roof structure using 10mm strips made from recycled car tyres. Walls were covered in a plasterboard and green glue sandwich and an 18mm marine ply floor was laid. The front wall hides a chimney breast and houses three Klipsch KS-7800 speakers behind a 100in Screen Excellence 2.37:1 screen, while two more speakers are in the sloped ceiling. Audio is processed by an Onkyo SC-5507 processor and the speakers are driven by a Sherborn 7/200 power amplifier, while the JVC HD990 D-ILA projector and Panamorph anamorphic lens are suspended from the ceiling.





## 24 PRO INSTALLS

### Best Marine Installation

#### Highly Commended: Dawsons Group – MY Chiqui

Using the Sunseeker standard audio-visual specification with Samsung screens and Bose audio systems, Dawson's created a system including a DVD server, which would allow operation from one control device. The client also specified US-standard equipment (as the yacht is used to cruise the waters off Mexico), and an upgrade to the speakers for the exterior zones of the yacht.

In the Main Saloon, Upper Saloon and Master Stateroom the equipment is controlled via Crestron TPS-6X controllers, and each zone has its own Kaleidescape movie player. Lower deck cabins are controlled via the Crestron Prodigy system, with each cabin having its own processor and remote control. In addition, the master stateroom and upper saloon have dedicated Sky boxes, and the main deck saloon Sky box is distributed by HDMI to all cabins.

Exterior zones are powered by a Bose Lifestyle system and dedicated amplifiers all controlled from the Crestron MTX3 handset.



### Best Media Room under £15,000

#### Finalist: Adept IS – Hutchinson's Home

The owner of this media room installation wanted a custom-made fireplace to form the focal point of the room. No accessories or speakers were to be visible, and control should be simple and intuitive. After discussing various screen options, rather than hiding the screen the client decided to go with a Loewe screen with a customised finish which complemented the fireplace.

In-ceiling speakers from Triad, a Rotel processor and amplifier, a Loewe Blu-ray player and Apple TV were fitted, along with Definitive Technology Surround DI 5.5BPS speakers and Super Cube III subwoofer.

Control was offered via Apple iPad with the Control4 App which handles AV, lighting, security, CCTV and access.

## CEDIA showtime

### Home Technology Event

CEDIA's Home Technology Event – formerly the CEDIA Expo – is promoted as the UK's only dedicated product and training event for 'smart home innovations'. This year it's at London ExCel from June 28-30. It showcases an ever-growing portfolio of products and services for designers, installers, integrators and specifiers of electronic systems in the home, plus a diverse education and conference programme. The catch, so far as *HCC* readers is concerned, is that the show has always been, and remains 'trade only', although there's an active debate within CEDIA as to whether that should change. What do you think? Should CEDIA open the Home Technology Event to the public? Would you attend? E-mail us at [hcc@futurenet.co.uk](mailto:hcc@futurenet.co.uk), and we'll pass on your opinions to CEDIA.



### Best Media Room over £15,000

#### Finalist: Sensory International – The Playroom

This media room was built in a completely separate building to the main house, with a view to creating a general entertainment and media space. The room was split into two distinct zones – with a full size snooker table at one end, and a dedicated space for watching satellite TV and movies at the other. An intelligent lighting control system helps divides the room into two areas, while the blinds are motorised and included with the lighting control so all light sources can be adjusted to suit the room's use.

The cinema area features a 5.1 surround system with Polk and Velodyne speakers, Arcam amplification and multiple sources, and a motorised projection screen and full HD projector. All of the main electronics are housed within the custom furniture units, as is a fridge.



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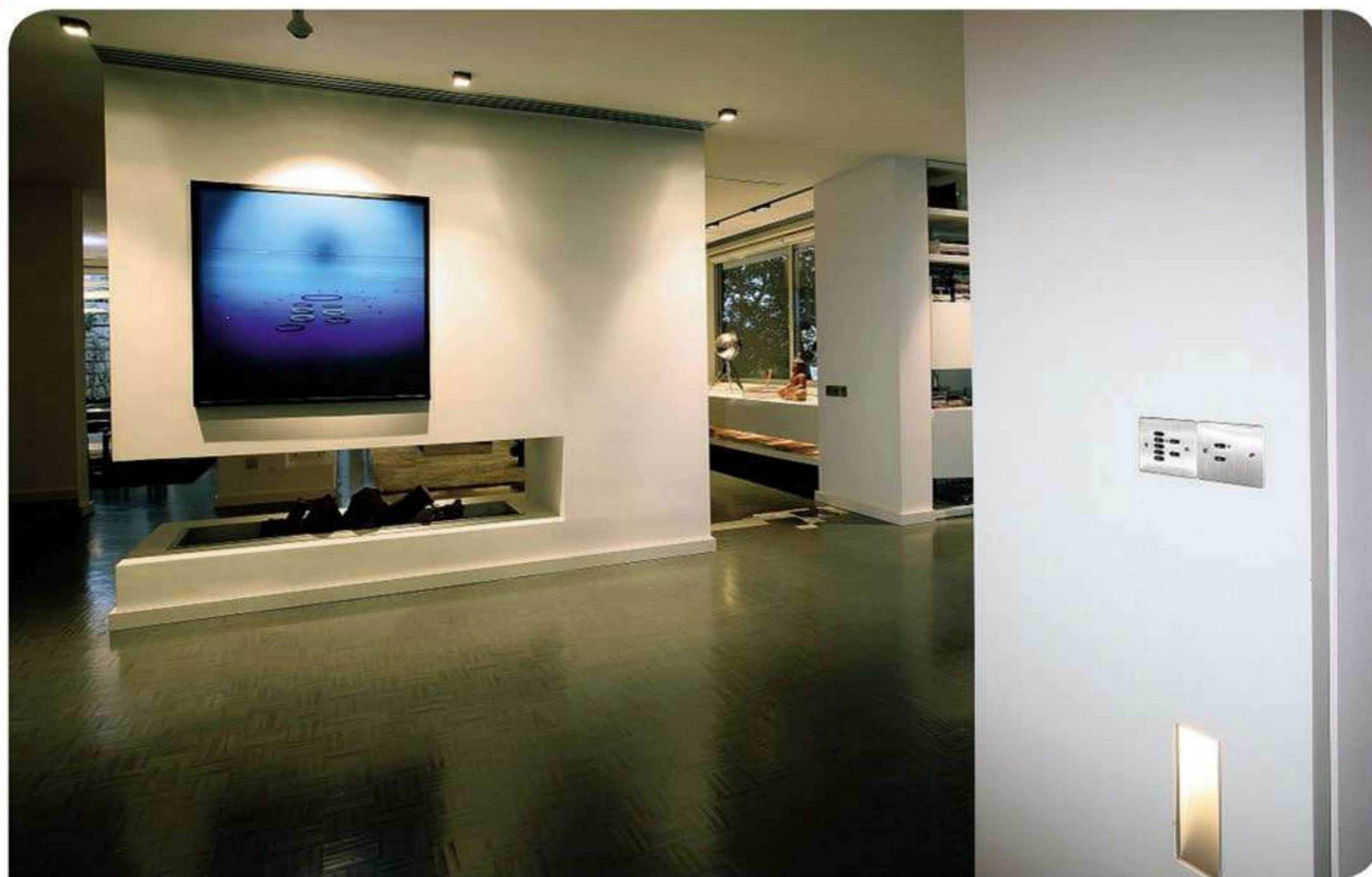
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## 26 PRO INSTALLS



### Best Integrated Home under £30,000

**Winner: Elytronic – Hi-Tech Renovation, Cyprus**

For this project the owner requested that all TV points in the house should have all the sources available, at any time and in high-definition. He also wanted his living room to feature a flatpanel screen on one side and a projector with a screen on the other, to serve as the home cinema room of the house. The flatpanel screen would only be using stereo speakers, but both displays would need to be able to work simultaneously. A multi-room audio system was also requested that would use a personal library of MP3 files as well as radio and online music services.

The control system selected was from RTI, consisting of three RTI RP6 processors, required by the number of IR devices requiring control; and four RTI T2-C remotes placed in the main areas of the house.

Equipment installed included a Buffalo Terastation 1TB NAS drive, a Fujitsu plasma TV and three Sony LCD TVs, a Denon AVR 2308 7.1-ch AV Receiver, Tannoy IC6DC in-ceiling speakers and a Tannoy TS8 Subwoofer, and a SIM2 Domino projector.



### Best Integrated Home £30,000 - £100,000

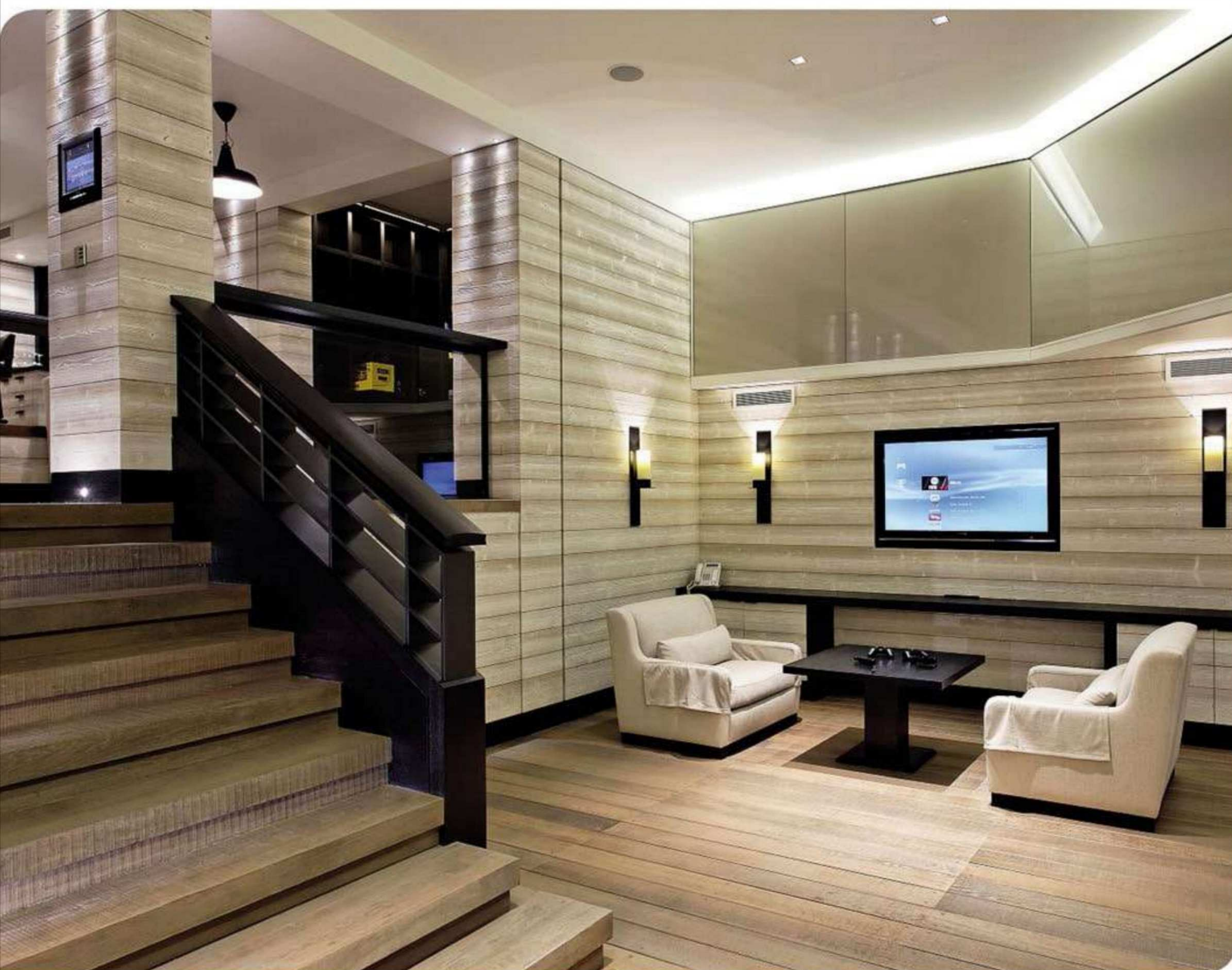
**Finalist: Elytronic – City Centre Penthouse, Cyprus**

The brief for this project was to integrate as many house services as possible into one system with one remote control or touch panel.

The living room system would consist of the home cinema surround speakers, with a 60in flatpanel screen, as well as a projector and a concealed 2.3m motorised screen and speakers.

A Control4 automation system head end was installed to carry video sources including digital satellite receivers, a Blu-ray player, a games console and two media players, with sources distributed using an AMX Precise LT 8x8 matrix. A Buffalo Terastation NAS was used to store MP3s. All the speakers in the house were Stealth Acoustics, while the projector was mounted into a Chief SL150 projector lift and the screen fitted in a specially designed space in the ceiling.



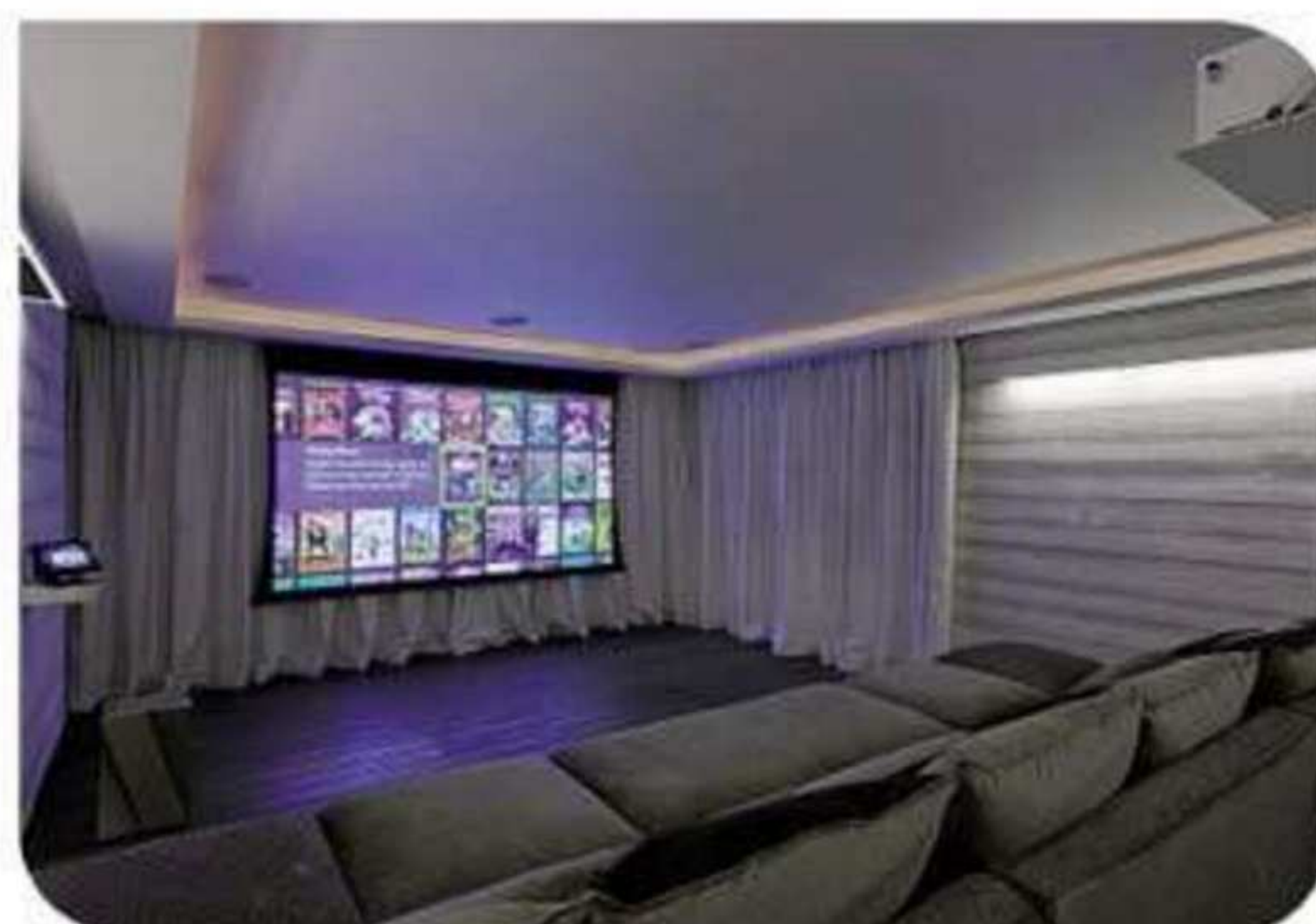


### Best Integrated Home over £100,000

**Winner: Henri Intégrateur Domotique – Villa des Amis, France**

This holiday home project involved extensive custom installation of lighting, music, audio and video, security, and control of all electronic devices. The four-floor house was fitted with control keypads throughout, and advanced technology used included biometric identification to prevent the children from entering the pool area without the supervision of an adult.

In the basement, the home cinema and gaming room were cabled in such a way that the updating process would be easy to manage; and the automated curtains and screen were designed so that the room could be opened up for other functions when the cinema was not in use.





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# Certified: AV-holic!

Every issue, an **HCC reader** invites you to take a tour of their beloved home cinema setup...



## Garage banned:

Lee has used up two thirds of his double garage for his home cinema build

## Who are you?

Lee Carruthers, 44.

## Are you an AV-holic?

We addicts never admit that we have an addiction. However, I do attend AVHA once a month...

## So, you built your own dedicated cinema room...

Yes – in the back two thirds of my double garage. I would like to have used the whole space, but having two children, and needing to house bikes, skateboards, scooters and windsurfs, I still needed some storage space.

I built a stud wall partition, which was filled with Kingspan for insulation and sound proofing. This gave me a room measuring 5m X 3.5m. I then studded out the rest of the room, leaving a 2in gap at the base of each wall. I also ran trunking up the walls to the speaker positions, ready to house the cabling. The spaces between studs were then filled with Kingspan, and then the whole room was plaster-

boarded, at which point I brought in a professional to do the plastering.

Once the plaster was dry I started to build the screen housing. This was all made from MDF and 2in x 2in wood, I boxed down from the ceiling and in from the left and right corners, covering the whole thing in black, velvet-like fabric as I went along to hide staples and fixings.

Below the screen I wanted something to sit the centre speaker on and to hide my subwoofer, so I built a curved unit made from MDF and wood, glued and screwed together for rigidity. I cut a section from the middle of the base of the unit to allow the sub to sit directly on the floor. The front of the unit has an open section covered in speaker grille cloth.

I then ran all the speaker and Ethernet cables to their required positions and fitted the skirting boards which are attached using clips and screws. This means I can remove them if I

## Room essentials

### A Sizeable cinema

This 120in Beamax screen works in tandem with a Panasonic PJ

### B Hidden sub

When Lee built this platform for the centre speaker, he crafted a space for his Velodyne subwoofer underneath

### C Magnificent 7

B&W 804s take care of the front left and right channels, with in-wall (F) and dipolar models (G) providing the rear soundfield

### D It's war!

AVP lives on in Lee's room

### E Serious power

Yamaha's DPS-Z7 receiver should offer enough juice to make this system sing

## Join the club

Do you want to see your home cinema system featured in the pages of *Home Cinema Choice*? If so, log on to [www.homecinemachoice.com/avholic](http://www.homecinemachoice.com/avholic) where you'll find all the information you need.



need to run further cabling in the future.

After that, all that was left to do was paint, fit the carpet and bring in the kit.

**And then it was time to relax?**

Not quite. I sat down and spent the next few days/weeks calibrating the system. I used various discs, such as *Digital Video Essentials*, which made it relatively easy to get a great picture and sound from the system. The difficult bit for me was what order to calibrate my various bits of kit; the amp, subwoofer and room EQ all had their own self-calibration systems, so which to do first? Anyhow, after trying various ways it was all done and the results are great. I now have a fantastic room with 1080p video and 7.1 lossless surround sound.

**What's in your current setup?**

I've got a Yamaha Z7 powering the 7.1 array, which uses Bowers & Wilkins speakers and a Velodyne SPL 1200R subwoofer. The projector is a Panasonic PT-AE2000, and the screen is a 120in Beamax. Sources include a Sony PS3, Popcorn Hour C200, Apple TV2, and a 4TB Synology Cube Station NAS.

**What was the last bit of kit you bought?**

I've tried to get iTunes on my Mac upstairs to play in the cinema room with very little success, so I bought the Apple TV 2 and an AirPort Express. The Apple TV is in the cinema room attached to the Yammy, while the AirPort Express is in the dining room connected to a B&W Zeppelin. The whole thing is controlled via an Apple

remote app on my iPad, and because I can also control the amp from the iPad, I can be anywhere in the house and have full control.

**So what's next?**

I'm not too sure what I'll be buying next as there is so much change and innovation going on at the moment. I'll wait to see. I have thought that the system would benefit from a dedicated Blu-ray player from both picture and especially from a sound quality point of view?

Any suggestions?

**How much have you spent on your AV habit over the years?**

Based on my current system being worth around £13,000, I would have to say, with all the different kit I had over the last 20 years, £30-£35,000.

**What does your family think of your hobby?**

My fantastic wife has tolerated me over the years with my addiction. My son and daughter think it's their room, but I know otherwise. The room is used on a daily basis and they all love it.

**What's your current fave disc?**

I'd have to say *The Expendables* but I really did like *Kick Ass* from last year.

**Are you excited about 3D?**

I don't mind watching it at the cinema where I think it works great, but in the home 'no thanks', not until you can watch it without glasses. Also, while I don't mind watching 3D movies at the cinema, I get quite angry when I'm charged a premium for watching a film that wasn't originally filmed in 3D, but has been converted (*Clash of the Titans* and *Thor* being just a couple of examples) ●



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## 32 FREESAT

Picture perfect: Astra's control room beams down high-quality Freesat signals



**CHOICE**  
Freesat offers  
over 130 TV  
channels  
and 40 radio  
stations





New kid on the block: Echostar's HDS 600RS (see p66) is the latest Freesat PVR to hit the high street

# Freesat's future

As Freesat celebrates its third birthday, **Alex Lane** asks MD, Emma Scott, how the cost-free service appeals to demanding AV enthusiasts

**F**reesat always was an odd concept; a not-for-profit, subscription-free service offering the best of BBC and ITV programming, requiring only a one-off payment for a receiver and (if you didn't already have one) a dish installation.

But with the digital switchover in full swing and the advance of HD channels, Freesat makes sense, and offers a lot to the AV enthusiast. We asked MD Emma Scott how it all happened.

'We have had a big impact,' she told HCC. 'We now have 1.6 million customers. It shows there was obviously a gap in the market for a high-quality, subscription-free TV service. We are the only free digital TV satellite option, and launching that choice was really important.'

'We launched in a recession and we are still in times of economic uncertainty, so in some ways we have played to the strengths of a recession because we are a quality, value TV service. We are simple, innovative and free. If you get that message across to consumers then they will believe it. We have the advantage that our two shareholders are very cooperative, which means we can turn obstacles around very quickly.'

So what is the unique appeal of Freesat?

'Out in front by a million miles is that we are subscription-free. After that, where we sit now is our brand, our promise, and our personality. Content is a very key part, because TV is a subject about which people are deeply

passionate and opinionated, and choosing your TV platform is a part of that. HD is obviously very important, as are feature sets, and we've tried really hard to simplify and make the user experience even easier. Twenty per cent of our sales



**Free to air:** 'Subscription-free is key to us' says Emma Scott, Freesat Managing Director

are Freesat+ PVRs, and it is very important to us that they are as easy as possible to use.'



The addition of new channels, particularly HD ones such as C4HD and NHK World, is of crucial interest to AV enthusiasts; but the real incentive must

be that all this is free. Will this ever change?

'Subscription-free is absolutely key to us. We will keep looking at pay-TV, but if we ever do it, it will be an optional add-on,' says Scott.

Technical development is certainly going to be essential, and Freesat already has its eyes on a third generation of hardware. 'You cannot get to switchover and relax, saying, "we have done our job". We have got to keep on innovating. We also have to give out the message that you do not have to replace your box all the time. It's really important to know that there are lots of things you can do without a new box, and that's why we made sure the HD box specification had things like Ethernet on it very early on.'

Freesat's next-generation spec will include DiSEqC control of motorised dishes, single cable routing, and support for payment mechanisms for broadband services such as LOVEFILM. In fact, some manufacturers, such as Panasonic, are waiting for the G2 spec to be ready before they launch new Freesat products.

'The convergence that people have been talking about for years is picking up pace,' says Emma Scott. 'People are watching much more TV in a PC-like way, and whilst the STB is never going to be a computer, we need to reflect more on the simplicity of the way that people consume media. We are not developing the iPad of the TV; it's absolutely a sit-back interface.'

Scott dismisses rumours that Freesat might merge with the forthcoming YouView IPTV service. 'Their primary focus is on Freeview 2.0. We hope there will be a YouView Freesat box, but there is only a point in merging companies if there's a broader objective to achieve for both of you, which we do not have.'

## Channel hopping

### What's on Freesat – and what isn't...

Freesat now has over 130 TV channels and 40 radio channels. Plus there are some channels which don't pay to be listed on Freesat's EPG that can be tuned manually using the 'non-Freesat services' menu option. These include Sky News, Travel Channel, Horse and Country, World Movies and more.

### What's on...

BBC: One, Two, Three, Four, BBC HD, One HD, Alba, New, Parliament, regional services, Red Button

ITV: 1, 2, 3, 4, +1 for each, 1HD, regional services

C4: C4, S4C, C4+1, C4HD, E4, E4+1, More 4, More 4+1, regional services

C5: Channel 5

CBS Drama, CBS Reality, CBS Action, Horror Channel

News: Al-jazeera, Euronews, France 24, Russia Today, CNN, Bloomberg, NHK World HD, CNBC

Film: FilmFour, FilmFour+1, True Movies ½, Movies4Men 1/2/+1

Lifestyle: Wedding TV, Information TV, Showcase, Food Network/+1

Music: Chartshow, Vault, Flava, Scuzz, Zing, NME etc

Special interest: Ocean TV, Renault TV, Daystar, Islam Channel, QVC, Gems, TV Shop, JML Direct, Ideal, Bet Star etc

Children: CBBC, CBeebies, Pop, CITV, PopGirl, TinyPop, Kix

Adult: Babestation, Filth

### And what isn't...

Channels not currently available on Freesat include: Dave, 4Music, Quest, Yesterday, Five\* and Five USA. So maybe don't throw out that Freeview box yet!



**DISHY**  
AV brands including Humax and Panasonic have signed up for Freesat



## 34 FREESAT



**Dish of the day:** Fitting and aligning a Freesat dish is a simple job for an experienced installer. Remember that a multiple LNB on the dish is necessary if you want to use a Freesat recorder, or connect up Freesat devices in additional rooms

### Get with the programme

After digital switchover, 90 per cent of the country will be able to receive a complete Freeview service, and 98.5 per cent will get the basic channels. But Freesat will offer 100 per cent coverage, and with better signal quality (see box-out below).

Freesat dish installation is straightforward (unless you live in a block or a conservation area, in which case you must check if you are allowed to fit a dish). You can buy a Freesat-compatible TV, or a set-top box; there are SD and HD options, and Freesat+ recorders, or PVRs.

If you have an existing Sky dish – maybe you have decided to let the subscription lapse – you can simply replace your Sky box with the Freesat device. The dish points at the same cluster of satellites, Astra 28.2°E and Eurobird 1, so it will not need to be adjusted. Alternatively, when you buy the box you will be offered a mini dish installation costing around £80. If you are handy, you could even mount a dish yourself, though you would probably need a satellite meter to do so.

HCC's installation was done by Freesat's agent Euro Aerials, which covers the whole of the South of the England; the work took about an hour,

including mounting the dish on the front of the house, taking cables through a convenient wall, connecting the Humax FOXSAT-HDR box and aligning the dish. Freesat recorders require two feeds from the dish's LNB (Low Noise Block), so it's wise to specify a multiple LNB, particularly if you might want to put an additional Freesat device in another room at a later date.

Feed cables go straight through wall, and the holes are then sealed and grommited to prevent water ingress. This prevents the possibility of signal degradation caused by a wall-plate, and is certainly a quick and cheap solution – in fact, Euro Aerials told HCC that many digital switchover customers have discovered that it's quicker and cheaper to go for a Freesat dish-and-box, than to have a new roof aerial fitted.

Receiver tuning is automatic, with local channels assigned according to the postcode you enter; then you're all set to enjoy the full Freesat experience! ●

**MORE HD**  
C4 HD, home of US show *Glee*, joined Freesat in April



## Uncovered: Freesat's superior AV quality

The HCC Tech Labs explore the audio-visual science behind Freesat broadcasts

One advantage of Freesat over Freeview is that its broadcasts tend to have superior picture and sound quality. We used a PC equipped with DVB-T/T2 and DVB-S/S2 tuners and transport stream analysis software to measure the bitrates of both free-to-air broadcasters.

Both HD platforms use H.264 video compression and a resolution of 1440 x 1080i. This format has less horizontal resolution than Blu-ray, but set-top boxes will scale it to 1280x720p or 1920x1080i/p.

Yet terrestrial HD channels tend to be carried with slightly lower bitrates than their satellite simulcasts, presumably due to bandwidth considerations. This means more compression, which will have a negative impact on picture quality. As an example, Freeview's ITV1 HD clocked up at 8Mbps one Monday evening, while the Freesat service measured at just over 10Mbps. The equivalent results for BBC1 HD were 8.5Mbps and 9.5Mbps respectively. But

variable bitrate encoding is used, and we came across bitrates as low as 4.3Mbps, and as high as 15Mbps. In bitrate terms, there's no measurable difference between true HD and upscaled SD.

There are also fundamental differences so far as audio is concerned. Terrestrial HD specifies AAC audio at 160kbps

(the BBC) or 128kbps (ITV1/C4) for the stereo soundtrack, or 320kbps if 5.1 sound is involved. Secondary audio-described soundtracks halve this, enabling the bitrate to be reduced to 64kbps without any loss of intelligibility. Soundtrack sampling rate is 48kHz. But few AV receivers

support AAC multichannel sound fed in via bitstream; however, some set-top boxes will either decode PCM audio, or transcode it into Dolby Digital or DTS, with an inevitable quality compromise.

For satellite, a more established and compatible technology is harnessed. Here, you'll find Dolby Digital (192kbps for stereo, and 384kbps for 5.1) on the main soundtrack, with MPEG1 Layer 2 used for the stereo 'audio descriptor', at 256kbps for BBC and 192kbps for ITV.

**Picture perfect:** Freesat's HD channels are carried with high bitrates





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# Flagship from start to finish

**Adam Rayner** tours the Bowers & Wilkins UK speaker factory and gets himself a bit of a polish...

I have been lucky enough to have flown around the world to listen to speakers. I've been shoeless in Far Eastern listening rooms and anechoic chambers, while being subjected to the best efforts of speaker designers of quite terrifying expertise.

I love the expensive test and measurement equipment these sonic wizards need. Often it's from a Scandinavian outfit called Brüel and Kjær, which is seen as the industry standard. Likewise, in nearly all the chambers and test rooms I have been in globally, I have encountered a set of Bowers & Wilkins speakers reserved as a 'known good' reference. Even the audiophiles at Chord cables, who have an awesome demo theatre to prove just what their wires can do, use B&W speakers to enable their dealers, musicians and punters to be able to tell subtle improvements in sound.

And even if your mates have never ever heard of the brand name 'B&W', the chances are they may have copped an eyeful of Nautilus – the iconic design item that looks just like a Ramshorn freshwater snail and informs the whole tube-loaded technology of Bowers' tweeter approach across all products. B&W has a Nautilus on a stand in the lobby at its UK factory, rotating majestically. Fifty-five grand a pair last time I looked... and they sell all they can make.

I was at the factory to have my mind bent by a subwoofer and get some background on the 800



**Halfway house:** Once the cabinets are crafted, it's time to put the drivers in



**Tour guide:** B&W's Dave Ford in the anechoic chamber

**Black power:** The Piano Black finish is the most popular choice for 800 Series owners



Series Diamond speakers, reviewed in this issue (see page 40).

The factory I had previously seen had changed enormously. Six stalwart B&W personnel had emigrated to China, taking the affordable-end speaker production machines with them to set up over there. Now flourishing and with the identical quality control procedures and the same people making them, the products are going great guns – the Zeppelin iPod dock in particular.

### Colour me black

The full live-action 'How It's Made' tour with factory factotum, Dave Ford, was an eye-opener. All that is made in the UK now is the high-end stuff, 800 Series and Nautilus. It might look mechanised, but what is going on in reality is like a grand-scale, hand-crafted cottage industry. Yes, there are machines the size of a whale that cook sheaves of veneers together with microwaves, but the assembly and final fit of the pieces is all done by hand, as the material is still a natural one, rather than some pile of resin and rubbery lumps. The enclosures are works of fine craftsmanship, far more in keeping with making high-end furniture than you'd expect, and the transducer technology that goes into the boxes is just delicious.

I could go off into purple prose about the length of throw of the bass cones and their strong Neodymium magnets (there was a 'loose' one clinging to some metal shelving which I couldn't prise off), or the amazing precision with which the vapour-deposited Diamond domes are assembled into the tubular-housed tweeters, and how their failure rate, while low, is based upon implacable perfection in results.

I could even get highly emotional about the sheer scale and weight in the passive crossovers'

**X-ray vision:** The inner workings of an 802 Diamond speaker



inductor coils, or the cunning with which B&W fettles and applies the raw Kevlar to make the best cones for midbass. I'll try not to, though (*You've failed – Ed.*). Instead, I'll focus on the truly awesome levels of craftsmanship, and epic amounts of labour, needed to reach the standards of beauty and finish that Bowers & Wilkins views as axiomatic.

Personally, I am of a generation and mien to really adore big speaker enclosures and I love that the 800s are veneered 'book matched'. However, while the process that creates the veneer finish involves some serious delicate sanding, sealing and lacquering, it is the 75 per cent of all speakers asked for in Piano Black that has taken over the upstairs of the factory, away from the transducer and enclosure making.

It is the job of at least 50 people to create that deep shine and lustrous black loveliness. In fact, part of the process is a tough inspection at every stage for imperfections and unevenness in finish.

As we walked along the lines of white-coated staff, I saw a few enclosures huddled together as if they were ashamed of themselves. They had some white marks on them, identifying dents and so forth. So help me, I looked and couldn't actually tell what was wrong with any of them, but I hadn't scrutinised them under the light or looked along their flanks as if they were second-hand cars.

The whole experience was uplifting for a number of reasons. Firstly, it's clear as crystal that the people making B&W's flagship home cinema product are damn proud of what they do. Secondly, buyers of the 800 Series Diamond speakers can rest assured they're getting a premium product. And lastly, the pride of the 'Made in Britain' label still exists ●

## Factory facts

The numbers behind Bowers and Wilkins' 800 Series production

Craftsman: **200**

Number employed on Piano Black fettling: **50**

Finished products output per week (800 Series & Nautilus): **420 of various models**

Hours spent polishing each Nautilus cabinet: **40**

Permissible blemish rate for Nautilus speakers finish: **Nil**



Permissible blemish rate for Bentley motor cars finish: **1 per m<sup>2</sup>**

Cost (retail) of in-house demo theatre system including amps: **£68,000**

Queen's Awards To Industry: **Three**

Other brands under B&W aegis: **Classé (owned) and Rotel (90 per cent global distributors)**

Other ranges of B&W speakers: **CM Series, 600 Series, MT (Mini Theatre), Panorama, FPM (Flat Panel Monitor), CI (Custom Installation) and CT (Custom Theatre). Also iPod, computer and headphone products**



**Ready to go:** Vapour deposited diamond tweeters are used throughout the range



**Crush:** The curved cabinets are made in a giant press



**Bass beasts:** B&W's DB1 subwoofer sports a pair of these 12in Rohacell bass drivers



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# REVIEWS

→ **Hardware highlights** BOWERS & WILKINS Reference-grade 5.1 speaker set  
 SAMSUNG 55in D8000 series LED TV INFOCUS Mid-range DLP projector YAMAHA Innovative  
 soundbar/subwoofer solution OPPO Universal disc spinner PANASONIC 37in 3D LED screen  
 CANTON Sub/sat system for smaller rooms ECHOSTAR Freesat PVR with Slingbox tech **AND MORE!**

## Plasma perfection



Is LG's range-topping THX 3D certified plasma worthy of its high-end price tag? Turn to page 44 to find out...

### HCC Ratings key

Outstanding	1 2 3 4 5
Above average	1 2 3 4 5
Acceptable	1 2 3 4 5
Disappointing	1 2 3 4 5
Dire	1 2 3 4 5



40 B&W 800 DIAMOND 5.1 → £22,500 → [www.bowers-wilkins.co.uk](http://www.bowers-wilkins.co.uk)

The 802 Diamond floorstanders are designed for serious audiophiles





# Diamonds are forever

**Adam Rayner** runs some old classics through B&W's 800 Series Diamond speakers – and finds new levels of enjoyment

The 800 Series from Bowers & Wilkins has for a long time been the weapon of utter perfection and choice for some of the world's most demanding sound engineers – because monitoring what *exactly* you are making in a recording studio is crucial. You want utter fidelity, not a brash and boastful presentation that makes everything sound fabulous in the studio, but then leaves it all a bit damp and frayed around the edges when not heard on such flattering speakers.

This system, with its new Diamond tweeters, is pretty much without equal for sheer revelatory precision. Often the 'Peers', or possible alternative choices at the price point, in our AV/CV box (see below left) are easy to describe – but in the case of these speakers, I'm not sure if the Peers I've chosen really are equals at all.

So what is going on here, then? Well, the speakers have been out for a few months in this dramatically important new guise with their bonkers Diamond tweeters, but such was the importance of their use in stereo hi-fi applications that getting a full home cinema set, complete with centre and subwoofer, has had to wait until the beardies have all rubbed their chins and expressed delight over mere pairs of these exquisite objects.

And gratifyingly enough, *Home Cinema Choice* and yours truly got the first dibs on this 5.1 setup. So although they have been around for a short while, make no mistake, you are looking at a multichannel exclusive.

## Big day out

I do love my home, yet it is modest compared to the lifestyle these

speakers are made to fit in with. So, needs must at this level and I had to go into London to audition the array in the demo rooms at illustrious dealers, Graham's HiFi.

They had a lovely demo set up for me to walk into, white silk gloves figuratively on (for I needed to do no unpacking nor setting up myself of these big beasts) with HCC Dep. Ed. Craven-san and Tech Labs manager James in tow, just so they could get an earful at the same time.

The system comprised a fabulous DB1 subwoofer (which was just doing its final 'doof-doofs' and self-tuning to the room as we arrived after final install tweaks); a pair of the bookshelf 805 Diamonds in rear channel duty; an HTM2 Diamond centre speaker (the bigger of the two available, with two bass drivers as well as the midrange and fabled Diamond tweeter) and, at the front, the all-but-biggest 802 Diamond towers.

A £15,300 combination of Classé SSP800 processor (£7,350) and CA5300 5 x 300W power amplifier (£7,950) was in control, with a JVC DLA X7 projector flinging the images with great quality. So, a simple two-box pre-power front end and a 5.1 channel speaker array. Just like in my living room...

We spun up a mixture of material on a Arcam BDP100 Blu-ray deck, although most awkwardly, I broke the weighty and solid-feeling remote for it by accidentally dropping it a foot onto carpet (not impressed and bloody embarrassed). The Graham's chap had to get another one.

The selection of demo material included my best-known reference, *Lifted* (the Pixar short from Disney's *Ratatouille* Blu-ray), then fan-

favourite *Blade Runner* in all its remastered wonderfulness. After that, there was time for the tigers-in-the-arena scene from *Gladiator* (we were in a Ridley Scott mood) before we let James sate his audiophile thirst with some two-channel music.

**From the first moment that Pixar's small angle-poise lamp called Luxo bounced into view, my chin dropped.** Incredibly, I heard layers of twanging steel spring I had only ever perceived as a mush before. As for *Lifted* itself, the sheer detail, fluency, power and scale was breathtaking. The squeaks of the boss alien's office chair, to the awesome slam when the house is flattened, to the *whoosh* of the spaceship's departure were just another experience. It was as if there was no limit to the 800 Series' prowess. That the perfectly potent power was coming from fabulous amps and the Arcam BD deck was a superb signal maker (even if the remote needs a redesign internally) was all audible.

I've specialised in subwoofers in more than one area of audio, yet I'm on record over and over raving about the importance of the tweeter in our perception of sound quality from speakers, as this smallest driver covers the bit we are using for locational cues in our hearing. The cat, owl and fox alike all use the rustle of a rodent in the undergrowth to point their pounce, after all. The highs are what give us detail, and B&W's use of vapour-deposited diamond to make the five tweeters that were pointing at us is utter 21st century genius, as this material offers a very high break-up frequency.

## AV/CV

**Product:**  
5.1 premium-grade home cinema speaker system

**Positioning:**  
The top products B&W make, if you exclude Nautilus

**Peers:**  
KEF Reference; ATC Concept 6 Active



## 42 REVIEWS



**We are family:**  
B&W's high-end  
driver technology  
is shared across  
the whole  
Diamond range

### → Specifications

#### **Bowers & Wilkins 802 Diamond**

**Drive units:** 1 x 1in vapour-deposited Diamond dome tweeter; 1 x 6in woven Kevlar midrange; 2 x 8in Rohacell cone bass drivers

**Enclosure:** Three-way downwards flow-ported, with seven piece internal matrix of MDF braces and Marlan teardrop-shaped midbass enclosure

**Frequency response:** 34Hz-28kHz +/-3dB

**Sensitivity:** 90dB (2.83V @ 1m)

**Power handling:** 50-500W

**Dimensions:** 368 (w) x 1135 (h) x 563(d)mm

**Weight:** 72kg

#### **Bowers & Wilkins HTM2 Diamond**

**Drive units:** 1 x in vapour-deposited Diamond dome tweeter; 1 x 6in Kevlar midrange; 2 x 7in Rohacell cone bass drivers

**Enclosure:** Three-way sealed

**Frequency response:** 41Hz-28kHz, +/-3dB

**Sensitivity:** 90dB (2.83V @ 1m)

**Power handling:** 50-300W

**Dimensions:** 841(w) x 329(h) x 387(d)mm

**Weight:** 31kg

#### **Bowers & Wilkins 805 Diamond**

**Drive units:** 1 x 1in vapour-deposited Diamond dome tweeter, 1 x 6.5in Kevlar midbass

**Enclosure:** Two-way, front ported

**Frequency Response:** 49Hz-28kHz +/-3dB

**Sensitivity:** 88dB (2.83V @ 1m)

**Power Handling:** 50-120W

**Dimensions:** 238(w) x 418(h) x 351(d)mm

**Weight:** 12kg

#### **Bowers & Wilkins DB1**

**Drive unit:** 2 x 12in Rohacell cones on long throw motors/suspensions.

**Enclosure:** Bipolar sealed

**Frequency Response:** 17Hz-145Hz +/-3dB

**On-Board Power:** 1,000W RMS

**Dimensions:** 460(w) x 490(h) x 410(d)mm

**Weight:** 44kg

**Connections:** Mono LFE line in on phono and balanced XLR as well as stereo line in on phono

An example of their potency was easy to find in the interview scene at the beginning of *Blade Runner* (after the brilliant, swelling Vangelis score) when a Tyrell Corp HR guy finds himself a replicant. The soundtrack is layered, complex and has some crazy close-miked vox. We hear the interviewer's cigarette literally crackle as it was recorded so well. On the B&W 800 Diamond array, it sounded more alight, more crackly and simply more realistic. This sort of sound, like gunfire, thunder and rustling Cellophane – even springing springs – have what's termed a very fast Rise Time that less able tweeters cannot track as well. **The superfast 800 Diamond tweeter makes the sound stage more detailed and rich, delicious and discernible.**

For instance, on any of the dozens of times I have seen this movie, I have never properly heard the announcement on the PA in the background, deep in the back of the mix, as Leon is interviewed. The 800 Series Diamonds let me hear what she is saying with utter clarity.

While still admiring how the grilles of these speakers – even the subwoofer – are all held on by tiny Neodymium magnets rather than sticky-out legs and ugly receptacles, I was also being pummelled by a section from *Gladiator*. The sound of metal on metal and clanking chains was just ridiculously good, while the tigers were full size and felt like they were in the room. And the system was so revealing that it was plain as day that Russel Crowe and Joaquin Phoenix's *tete-a-tete* was recorded in ADR...

Finally, James perched on the floor in front of the 802s for a quick play with some old rock dinosaurs, Jeff Beck and Eric Clapton. I took control of the remote again and in a thoroughly non-hi-fi way, proceeded to blow the bloody doors off the demo room, just for a minute or two. The full range nature of the 802s mean they make a superb stereo set up – those twin 8in bass drivers had no trouble tracking the bluesy basslines.

### Leading edge

The B&W 800 Diamond series loudspeakers represent the leading edge in home cinema audio and my time at Graham's has given me a new career-grade reference for utter excellence.

This £22,000 system offers brutal power, but with delicacy and control. The result is consummate, effortless audio beauty. If you're spec'ing a serious install, put it on your must-audition list – and if your wallet won't stretch this far, please remember there are less outrageous 800 Series Diamond models available ●

### HCC VERDICT

Bowers & Wilkins 800 Series  
Diamond 5.1  
Approx £22,500

**Highs:** Breathtaking surround and stereo performance; gorgeous design and build

**Lows:** Revealing of poor quality sources; not exactly cheap

**Performance:** 1 2 3 4 5

**Design:** 1 2 3 4 5

**Features:** 1 2 3 4 5

**Overall:** 1 2 3 4 5





TV



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44 LG P50PZ950T → Approx £1,600 → [www.lg.com/uk](http://www.lg.com/uk)

# Fine-tuned powerhouse

With THX certified 3D and net connectivity, this high-end plasma heavyweight is no wallflower.

**Steve May** finds beauty within the beast

## AV/CV

**Product:**  
50in plasma TV with Smart TV functionality

**Positioning:**  
At the top of LG's extensive plasma TV range, beaten only by a 60in model

**Peers:**  
Panasonic TX-P50ST30;  
Panasonic TX-P50GT30

LG's plasma screens have a reputation for unassailable value, but the brand was also first to ink deals with THX and ISF for certification and calibration, and has generally impressed with the finesse of its larger panels.

The P50PZ950T continues that trend. Not only does this new model offer loads of user control through its Advanced and Expert tweaking menus, but it's also 3D-ready with Active Shutter technology, and bristling with net-connected niceties, such as DLNA media streaming and Smart TV functions.

## Easy to use

LG's menus are nothing if not intuitive. The user interface is bold and effective, while clear menus and large icons grant access to most features and functions. There's even a simple picture Wizard to help technophobes set up picture quality.

The TV ships with two remote handsets: the standard LG one plus the Magic Motion remote control. The latter is an RF-based wand that allows you to point and click with an onscreen cursor.

Also included in the box is a wi-fi dongle to get online. Whenever possible, however, I suggest you try and connect the set via Ethernet (using Power Line if you don't have a LAN feed to your viewing room).

LG's second-generation Smart TV offering is groovy from the get-go, including BBC iPlayer, YouTube, Picasa and Facebook, which can be supplemented with free and paid downloads from the LG apps store.

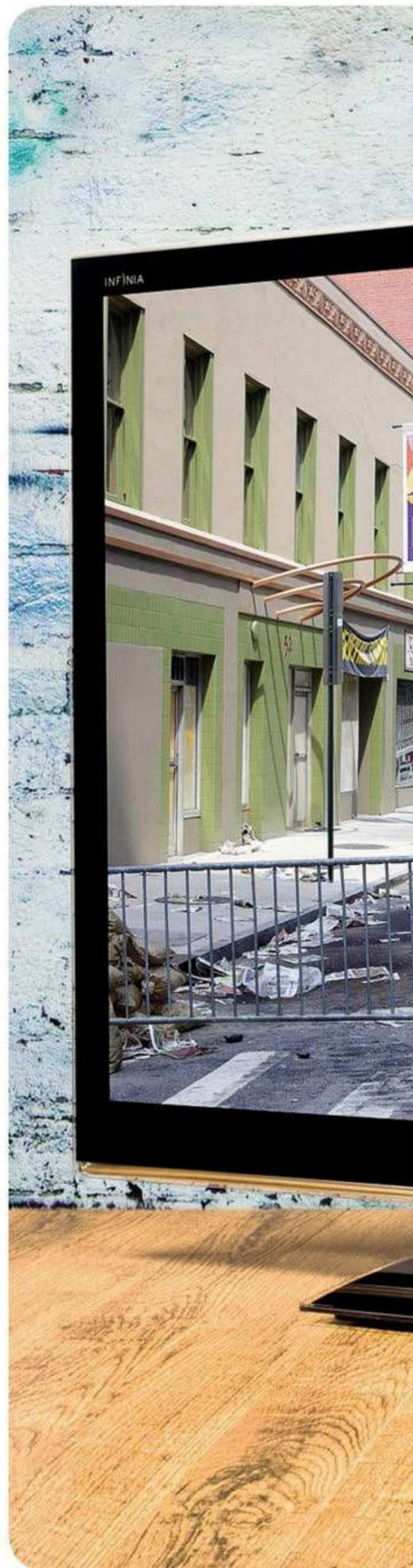
You can also fire up LG's new Media Link server client from the

Smart TV hub dashboard. You'll need to install a special version of Plex on a networked PC first to get it working, though. Plex then catalogues your sound and vision files and uses metadata tags to present them on your TV in a wonderfully graphic environment. The PC has to remain on for this to function, which is a bit of a drag (what we really need is a Media Link client for an LG NAS). However, this mini-Plex is so good, I'd probably invest in a low-cost Acer Revo PC just to act as a Plex server for the TV.

If you have a spare external hard drive hanging around, you can also time-shift from the telly. **LG has arguably the best implementation of HDD recording on a TV I've yet seen.** The brand dubs its external HDD recording facility Time Machine, and rightly advocates that its main use is as a cache for pausing and replaying Live TV, although you can also manually record events using a timer. With my trusty Seagate Freeagent Go I was soon setting shows to record from the TV Guide listing. Remember, there's only a single tuner available, though.

## Unleashing the picture

The PZ950T is capable of a sharp, contrasty hi-def image, but you must leap through some hoops to eke the best from the set. First, jump into the Picture Menu and make sure the APS Powersave mode is disabled; then turn off the Energy Saving Intelligent Sensor. Both of these wretched eco options will conspire to drown your viewing in a sullen cloak of drizzle. ➤





With THX certification, LG's 50in plasma will appeal to serious movie fans



### → Specifications

3D: YES Active Shutter Full HD: YES 1080p24

Tuners: YES Freeview HD Component: YES

HDMI: YES four HDMI

Resolution: 1,920 x 1,080 Sound: 2 x 10W

Brightness: Unclaimed Contrast ratio: 3,000,000:1

Dimensions (w/o stand): 1175 x 721 x 50mm

Weight (w/o stand): 28.9kg

Features: 3D Ready (one pair of Active Shutter AG-S250 rechargeable USB glasses supplied); 600Hz Sub Field Drive; USB for media playback (JPEG, MP3, AVI, AVCHD, MKV support); Smart TV Portal featuring YouTube, BBC iPlayer and more; Ethernet connection; THX 3D certification; ISFccc mode





## 46 REVIEWS

**Dark star:**  
LG's plasma  
panel offers  
detail-rich  
black levels



The final must-do tweak is to turn Dynamic Contrast off. If you don't, sparkling noise will pepper darker scenes. This was driving me nuts for a while, until I realised what was causing it. Once this irksome triumvirate has been toggled off, you'll find it's possible to tune up an involving, exciting image. Black levels are suitably subterranean and there's copious shadow detail on offer.

**A near perfect 20/20 B&W step greyscale was achieved; much of which can be attributed to the set's TruBlack Filter.**

Motion resolution on this set is excellent and registers a full 1080 lines under lab conditions. Even my challenging horizontally scrolling text, pattern presented few problems for the panel, with the moving characters remaining legible with no smudging. I did note some minor low level fizz, but this proves insignificant when viewing from a metre away.

The screen is prone to cinematic judder, as evidenced by some horizontal, vertical and diagonal pans. These occur with Film Mode both on and off. A sequence from Disney's *Sleeping Beauty* (Blu-ray), which features Prince Charming galloping behind a rocky outcrop, stutters like King George VI.

However, this is a small price to pay for artefact-free motion. LED TVs offer copious fast frame rate modes to smooth out the effect, but there's always a high price to be paid in artefacts and visual texture.

If your primary content sources are high-definition, make sure that you select Just Scan in the aspect ratio menu. Doing this means you won't lose any picture information beneath the bezel.

The P50PZ950T's stereoscopic performance is solidly entertaining.

LG offers Passive 3D models, but this is an Active Shutter set. There's no great philosophical point to it being Active, it's just that LG's display division can't manufacture FPR Passive Polarisation plasma panels – that tech is only LCD present. Happily, the panel delivers full HD 3D for maximum clarity, with minimal overt crosstalk.

There's a 2D-to-3D convertor onboard too, although the sense of depth it gives is unpredictable at best, and I wouldn't rely on it to convert flat TV and movie sources.

If I do have a reservation with the P50PZ950T it concerns image retention. It was not uncommon during my audition to spot high contrast images from previous viewing sessions lingering in dark backgrounds; more often than not this would be of the Smart TV hub itself. This is not screenburn and the image retention always went, but it was unsettling none the less. I would expect this effect to subdue over time. Fresh from the box, however, the set should be run at lower than normal contrast levels.

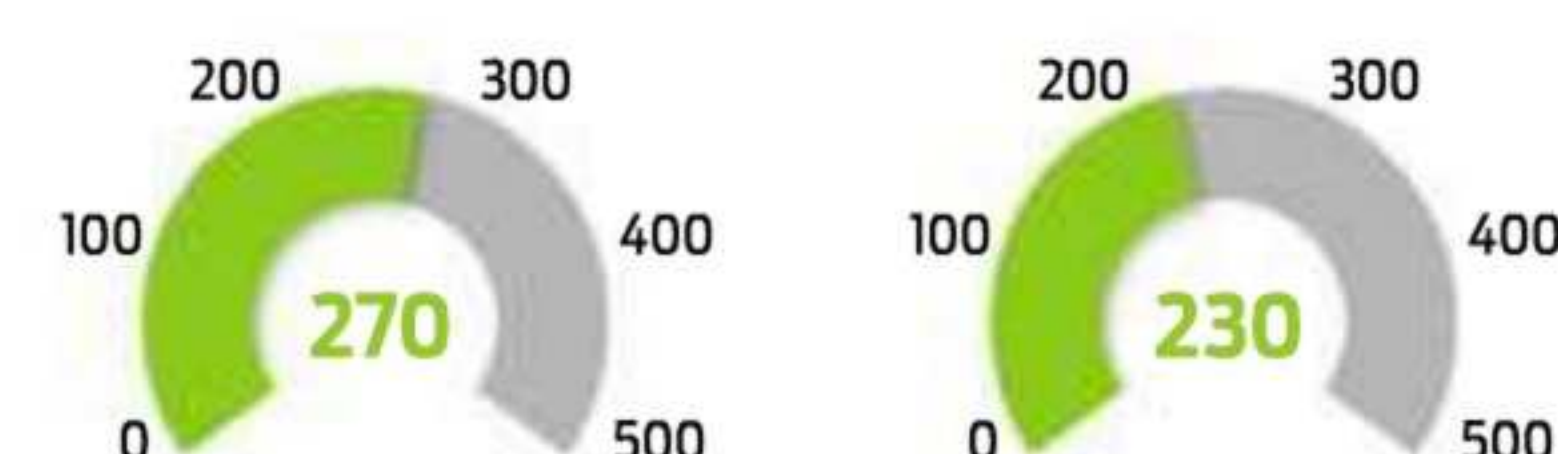
LG has built in a raft of anti-screenburn tech (called Image Sticking Minimalisation), which comprises a White Wash, pixel Orbiter and a Colour Wash.

### Mission accomplished

Overall, the P50PZ950T is an accomplished plasma screen capable of an excellent 2D HD picture (although LG appears to have deliberately hobbled its true potential). Images from its Freeview HD tuner are crisp, while Blu-rays look positively cinematic. The screen's Active Shutter 3D performance is also extremely good. My bet is you'll also soon find it at a grand price, too ●

### → Tech Labs

#### Power consumption: Watts



**White screen:**  
This result is for default APS picture mode with Energy saving on 'Intelligent sensor' in a bright room

**Test footage:** With our movie material power consumption averaged around 230W with energy saving and APS mode off

#### TV Contrast: Ratio



#### Colour temp: Kelvin



**Picture:** An impressive figure post-calibration, with 11.8fL, although the default 'Standard' picture mode offers an equally healthy 40,200:1

**Presets:** Plenty of options here, with THX mode close to 6,500K  
**Vivid:** 11,900K  
**Standard:** 9,200K  
**APS:** 11,500K  
**THX Cinema:** 6,300K  
**THX Bright room:** 6,400K  
**Sport:** 12,500K  
**Game:** 9,000K



### HCC VERDICT

LG P50PZ950T  
£1,600 Approx

**Highs:** Well thought out Smart TV portal; effective and detailed Active Shutter 3D; motion resolution  
**Lows:** Eco modes compromise picture; wi-fi not integrated

**Performance:** 1 2 3 4 5

**Design:** 1 2 3 4 5

**Features:** 1 2 3 4 5

**Overall:** 1 2 3 4 5



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**Adam Rayner HCC #183**

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In the battle of the thin bezels,  
Samsung is leading the way

### → Specifications

HD Ready: YES including 1080p/24  
Tuner: YES Freeview HD and Freesat HD  
Component video: YES one input (rear)  
HDMI: YES four, including v1.4 options  
PC input: YES one D-Sub Resolution: 1,920 x 1,080  
Sound: 30W Brightness: N Contrast ratio: 'Mega'  
Dimensions (off stand): 1233(w) x 710(h) x 30(d)mm  
Weight: 16.2kg

Also featuring: '800CMR' motion processing; Smart Hub;  
open internet access; ring-fenced online features; USB  
media playback (MP3, JPEG, multiple video support);  
AllShare PC connectivity; LED Motion option; 2D-3D  
conversion; active 3D playback; one pair of 3D glasses  
supplied; Bluetooth 3D transmission system; 10p  
White Balance adjust; edge enhancement



### AV/CV

**Product:** A 55in edge LED TV with built-in active 3D playback and Smart Hub multimedia functionality

**Positioning:** This year's flagship model

**Peers:** Panasonic TX-P50GT30; LG 55LX9900





# 3D writ large

The flagship model from Samsung's 2011 3D TV range makes **John Archer** a very happy man

A couple of issues back, we brought you our first impressions of Samsung's flagship UE55D8000 when it arrived too late in the day to run through our Tech Labs. To recap, this is a £2,500 55in edge LED 3D set sporting an insanely thin bezel of just 5mm, plus Samsung's new Smart TV functionality, which combines a superb new onscreen menu hub (providing instant access to just about every input, app and content source) with a web browser and a much stronger app offering than you got with Samsung's previous Internet@TV system.

These headline features make it instantly desirable. But does its AV performance hold up to scrutiny? Oh yes.

Although there were many impressive things about Samsung's first-gen 3D TVs, over time I became increasingly aware of one fundamental weakness: crosstalk double ghosting with 3D. So it's a relief to be able to say that crosstalk noise is much less of an issue with the D8000. Footage that caused so much trouble with last year's models, such as Sky's 3D golf coverage, now looks cleaner and more engaging. The only time crosstalk really troubled me, in fact, was with very bright material.

That said, even this much-reduced crosstalk looks less impressive compared with Panasonic's almost crosstalk-free P50GT30. It seems plasma still has the edge here.

Crosstalk aside, the D8000 boasts the brightest and most colour-rich 3D pictures I've yet seen on an active shutter set – and the active technology delivers a significant benefit in resolution, too, especially with Blu-ray, compared with any passive set I've encountered.

With the impressive brightness in 3D mode, this TV also delivers an

additional benefit: shadow detail. So in dark areas, you see almost as much detail as you would in very bright parts of the picture.

Further improvement over last year's models comes courtesy of the D8000's latest 800CMR motion handling system. While you need to spend time tweaking the judder and blur components of the motion processing engine, with a little work you can get the right balance between reducing motion problems and controlling rogue side-effects.

The improvements with motion in the 3D domain are particularly striking, and help the TV reproduce all the clarity and detail from full HD 3D BDs that was the whole reason active 3D was created in the first place.

## Nailing 2D

Most people will spend the vast majority of their time just watching 2D. So it's handy that the D8000's 'flat' performance is good too. Without spex on, you're more free to appreciate the outstanding black level response. Dark scenes suffer remarkably little with tell-tale grey clouding and there are only the faintest traces of backlight seepage.

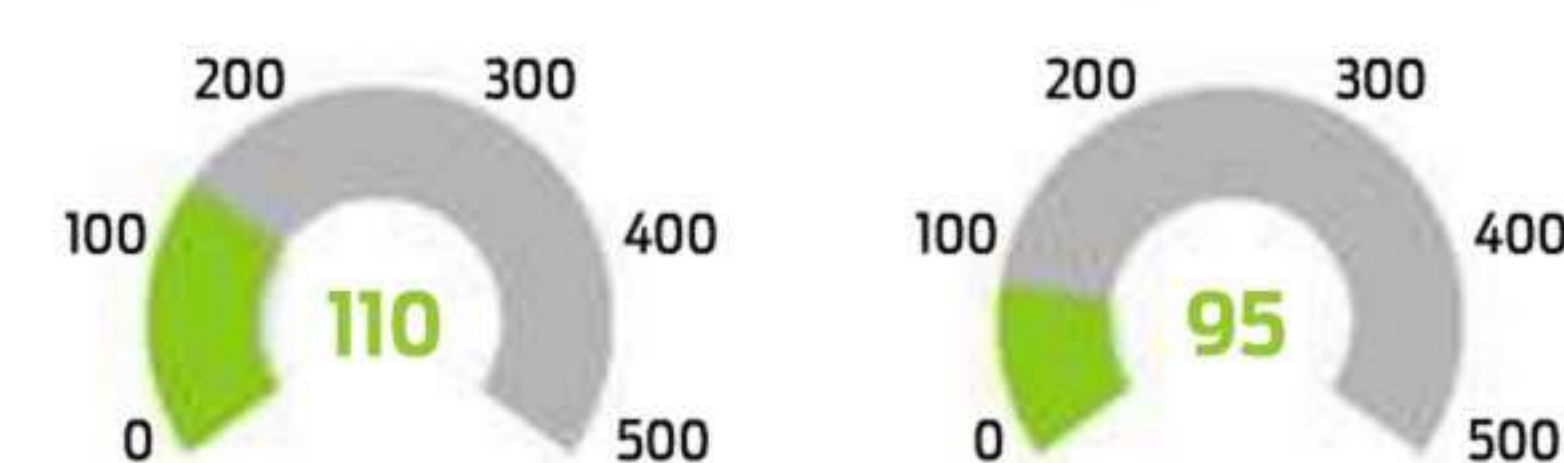
Detailing looks extremely high in 2D mode, too, given extra definition by the image's brightness and good contrast, and even standard-def survives the tough journey up to 55in, thanks to superior upscaling.

My only complaint I can muster about the D8000 are that its pictures lose contrast and colour saturation if viewed from much of an angle, which could be an issue if you want to wall-mount it, and that it only ships with a single pair of 3D glasses.

In every other way, though, the D8000 is yet another delicious example of Samsung's flatscreen mastery.

## → Tech Labs

Power consumption: Watts



**White screen:**  
With power saving set to high this drops to 45W

**Test footage:**  
A drop in power consumption with movie footage

Contrast: ratio



**Picture:** A substantial real-world contrast measurement, recorded in movie mode, with a high luminance of 64.8fL

Colour temp: Kelvin



**Presets:** Full manual adjustment allows white point to be fine-tuned, but the presets are good, too.  
**Cool:** 12,400K  
**Standard:** 9,800K  
**Warm 1:** 7,900K  
**Warm 2:** 6,800K  
**Movie:** 6,600K

## HCC VERDICT

Samsung UE55D800  
£2,500 approx

**Highs:** Stunning 2D pictures and very good 3D pictures; excellent Smart TV functions

**Lows:** Still a little crosstalk in very bright scenes; limited viewing angle

Performance: 1 2 3 4 5

Design: 1 2 3 4 5

Features: 1 2 3 4 5

Overall: 1 2 3 4 5



50 INFOCUS SP8604 → £2,500 Approx → [www.infocus.com](http://www.infocus.com)



# Sensible cinema

While InFocus' new projector is a fairly conventional beast, its picture performance is good enough for **John Archer**

InFocus has developed a reputation over the years for not being afraid to be different. A few years ago, its original ScreenPlay and subsequent Play Big projector ranges arguably revolutionised the way affordable projectors were designed for the home market.

Perhaps, though, this spirit of innovation went a bit far with the brand's previous projector, the SP8602. For, while its provision of swappable, different-coloured top panels and an glowing power light around the lens were designed to make the projector more home friendly, they also felt a bit, well, mad.

So, it's oddly reassuring to find the SP8604 heading back to more conservative and restrained territory. In fact, there's even a small argument

## AV/CV

### Product:

A mid-range DLP projector

### Positioning:

Currently the only InFocus ScreenPlay home cinema projector in the UK, but it's expected to be joined by an entry-level model soon

### Peers:

Vivitek H5080

for saying that the latest offering is a little too conventional. But I'm getting ahead of myself.

## Big hunk

The SP8604 is passably attractive so long as you don't mind your kit having a bit of size to it. It's got plenty of curves and its top edge gleams with a high gloss black finish, but its footprint is large and it stands quite tall. The height is largely explained by the impressive and promising size of the centrally mounted lens.

Under a panel on the top edge can be found simple horizontal and vertical image shift 'wheels' to help you position the image correctly on your screen. The optical zoom is rather limited at 1.25x, but this is offset by the fact that this projector is

available with short, medium or long-throw lens options.

One final notable SP8604 design element is a striking metallic blue ring sitting right around the lens. This, of course, harks back to the illuminated neon blue ring of the SP8602, but thankfully, this blue ring is just metal, with no colour-cast-creating lighting.

The blue circle around the lens does take on more importance than it would normally warrant, though, when you realise that it's pretty much the only aesthetic point of difference between the SP8604 and another projector we tested a while back, Vivitek's H5080. Clearly these two PJs have a degree of common heritage – not unusual in the affordable projection world these





**Blues brother:**  
This time, the blue ring around the lens doesn't actually glow. Hooray!

days. The SP8604's similarities with Vivitek's impressive mid-range model continue with its connections, notably the provision of three HDMI's when most models only have two.

Also notable at this market point are USB and RS232 control jacks for integrating the projector into a wider AV system, plus two 12V trigger outputs that come in very useful for powering up/down secondary kit such as a motorised screen.

Even the SP8604's onscreen menus bear distinct similarities to those of the H5080. But there are a few feature differences, too.

### Vive la difference

As even entry-level projectors tend to offer startlingly expansive toolsets these days for fine tuning their pictures, it's no surprise to find the mid-range SP8604 covering pretty much all the bases you (or even a professional installer) could hope for.

For starters, as well as a trio of reasonably well considered picture presets, you get three memory slots for storing your own settings – for different inputs, or types of source material, for example.

An 'advanced' picture menu, meanwhile, plays host to such enthusiast tricks as gamma and flesh-tone adjustments, no fewer than 10 different manual iris settings, and the ability to adjust the gain, saturation and hue of not just the three primaries, but also secondary colours of cyan, magenta and yellow.

I was also intrigued to find both a Motion Smoothing system and something called DynamicBlack. The latter is an auto-iris system for adjusting brightness 'on the fly' to deliver a wider contrast range.

While I'm used to finding such iris arrangements on LCD projectors, DLP projectors often just stick with manual iris adjustments due to their innately superior contrast potential.

So far, while the SP8604 is well-specified, I haven't found anything truly innovative or

groundbreaking. And we guess the same can be said of its performance. But does this matter? Nope.

For the bottom line is that the SP8604 produces a performance at least as good as that of the Vivitek H5080, while costing (on current prices) not far shy of £500 less. A price that includes a five-year parts warranty. So on price, at least, the SP8604 really does appear to break new ground after all, and in arguably the most welcome way possible.

A number of things stand out in particular about the SP8604's performance for its money. **Colours enjoy real 'pop' and vibrancy, with intense, full saturations being underpinned superbly by a really impressive black level response.**

Well, at least the black level is impressive after a little work – namely, deactivating the DynamicBlack feature (as it causes distracting brightness shifts), and setting the manual iris to around level four.

Also striking with *Tron: Legacy* on Blu-ray is how immaculately sharp the SP8604's pictures are. Detail levels are high, edges look crisp without seeming forced, and best of all this is achieved without the picture being accompanied by the sort of fizzing, dotting noise that can sometimes plague very sharp images – especially with DLP projectors.

The SP8604's DarkChip 3 DMD and six-segment colour wheel work together beautifully, meanwhile, to ensure there's practically no sign of single-chip DLP's rainbow effect problem. *Tron: Legacy's* heavy use of bright objects against dark backgrounds could have been designed to trip DLP projectors up in rainbow terms, but the SP8604 emerges at the end of the film almost completely unscathed.

Motion is handled decently well for the most part too. I personally chose to leave the Motion Smoothing feature turned off, as it tends to cause a few rather obvious unwanted side-effects such as haloing around *Tron's* 'bikes' as they hurtle across the screen. But even without Motion Smoothing, the image only exhibits what feel like pretty natural, filmic levels of judder; there doesn't seem much in the way of extra judder introduced by the optical engine.

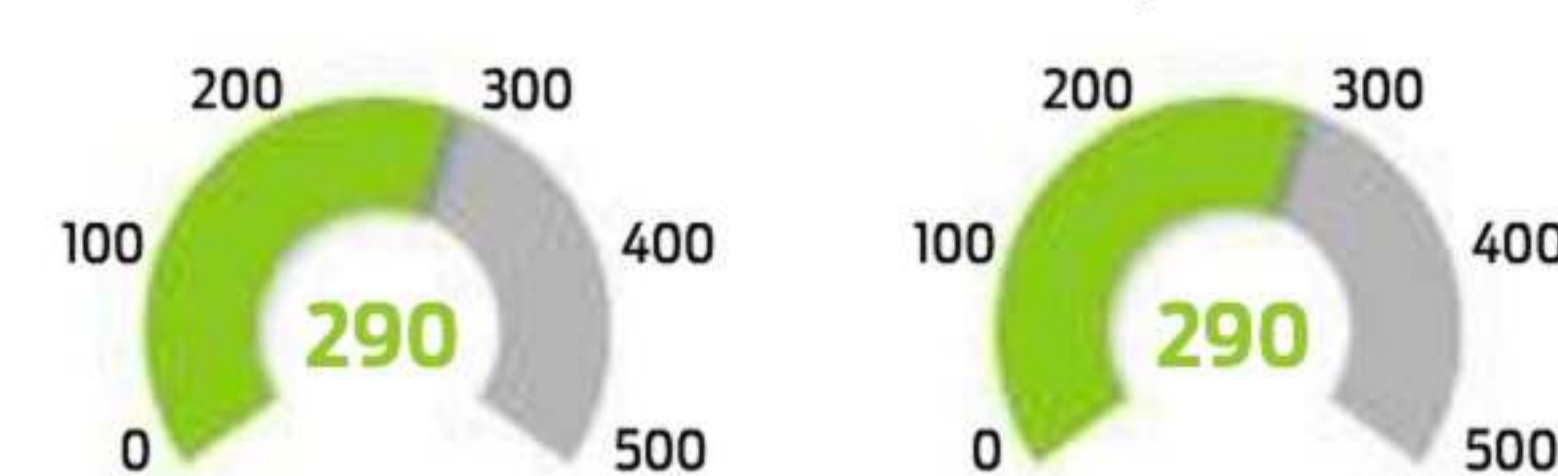
You can get more colour blend finesse and contrast if you step much further up the projection price ladder, and it's impossible to ignore the fact

that an extra grand would get you JVC's awesome, 3D-capable DLA-X3. Plus, the SP8604 has a couple of issues: it can run a bit noisily, especially if you make the mistake of running its lamp on its brightest setting, and I noted a curious blue haloing around the edges of bright objects during swift camera pans (of the sort typically seen while playing FPS console games).

But none of this alters the fact that the SP8604 is better than it really ought to be for £2,500. If this sort of high-value approach proves symptomatic of InFocus' latest assault on the UK PJ market, I look forward to see what it does next ●

### → Tech Labs

#### Power consumption: Watts



**White screen:**  
With our white 100IRE test screen, the InFocus draws 290W

**Test footage:**  
Power output does change with test footage, but selecting the 'boost' lamp mode increases it to 350W

#### Contrast: ratio



**Picture:** After calibration the projector delivered an above-spec contrast ratio of 55,000:1, with a luminance of 16fL

#### Colour temp: Kelvin



**Presets:**  
We were able to achieve close to 6,500K via the wide range of manual controls, but it proved pretty tricky  
**Normal:** 6,700K  
**Movie (normal):** 6,900K  
**Movie (warm):** 5,200K  
**Movie (cool):** 8,100K



### HCC VERDICT

InFocus SP8604  
£2,500 approx

**Highs:** Very punchy pictures; little video noise; great value  
**Lows:** Blue haloing during very fast camera pans; DynamicBlack and Motion Smoothing aren't great

**Performance:** 1 2 3 4 5

**Design:** 1 2 3 4 5

**Features:** 1 2 3 4 5

**Overall:** 1 2 3 4 5

### → Specifications

3D Ready: NO

HD Ready: YES 1080p, can handle 1080p/24

Component video: YES 1 HDMI: YES 3 (v1.3)

PC input: YES (D-Sub) 12V trigger: YES X 2

Resolution: 1,920 x 1,080

Brightness (claimed): 1700 Lumens

Contrast ratio (claimed): 30,000:1 (with DynamicBlack)

Dimensions: 430(w) x 181(h) x 343(d)mm Weight: 8.6kg

Features: Primary and secondary colour management; x1.25 optical zoom; short/med/long throw lens options; high/low lamp modes; noise reduction; motion processing; gamma settings; 5-year warranty on parts; BrilliantColour; colour temp adjustment; fleshtone adjustment



# Meet the bouncer

Looking for a credible alternative to a multi-speaker surround system? **Steve May** has just the ticket

The Quick Start guide supplied with Yamaha's YSP-2200 system concludes with a clear message in bold, overlarge type. It reads: 'Then have fun for playback!'

While the English may be a bit mangled, the sentiment is spot-on. Using this soundbar and subwoofer system is indeed a lot of fun.

The two-piece system comprises the main YSP-CU2200 console and a somewhat chunkier passive subwoofer, the NS-SWP600.

The former has a footprint 944mm wide, but stands just 79mm tall on adjustable/removable feet. The woofer, meanwhile, has been designed to sit below the CU2200, rather than in a corner. Being the same width as a typical hi-fi component (435mm) it fits snugly into a regular system rack.

## AV/CV

**Product:** Low-profile sound projector and passive subwoofer

**Positioning:** The slimmest YSP model offered by Yamaha, designed for 42in screens and above

**Peers:** Harmon Kardon SB16; Panasonic SC-HTB520

Placing the sub close to the main unit brings a clear benefit: the woofer localises in the right place. Located off to the side its high crossover will draw attention to itself, unravelling the soundstage.

## All bar none

Installing the YSP-2200 system is a doddle. The CU2200 features much the same connectivity that you'd find on an AVR. There are three HDMI inputs and one output (with ARC). All are HDMI v1.4a, which makes the system compatible with 3D source components and TVs. You also get three digital audio inputs (two optical), a pair of stereo phono inputs, composite video and a dedicated iPod dock connector, which partners with the brand's YDS-12 dock (not supplied for review).

Loudspeaker spring clips (bell wire helpfully supplied) link the CU2200 to the subwoofer. Should you need it, an IR flasher is also thrown in.

Yamaha's YSP technology is able to create an extended soundfield by bouncing sound beams off the walls of your listening room. Targeted and delayed, these create a multichannel listening experience. There are 16 directional drivers in the CU2200 console. Each of these has its own dedicated digital amplifier and so can be individually controlled. An IntelliBeam auto-calibration system configures the system, performing two key functions: the first is to optimize all 16 beam angles, the second is to balance delay and volume levels. Not only does Yamaha supply a mic

## → Specifications

Dolby Digital TrueHD: YES DTS-HD Master Audio: YES

Analogue multichannel input: NO

Power output: 132W total power: 2W x 16 beam drivers + 100W sub

AV inputs: Composite video, stereo phono, two digital optical inputs, one coaxial digital input

HDMI input/output: YES three inputs, one output all v1.4a

Video upscaling: NO Component input/output: NO

Dimensions (YSP-CU2200): 944(w) x 79(h) x 145(d)mm

Weight: 4.3kg

Dimensions (NS-SWP600): 435(w) x 137(h) x 350(d)mm

Weight: 6kg

Features: 16 x 2.8cm beam drivers; Cinema DSP Music; Movie & Entertainment modes; variable listening modes (5BeamPlus2, 3BeamPLUS2+Stereo, 5 Beam, Stereo+3Beam, 3Beam, Stereo and My Surround); compressed music enhancer; IntelliBeam auto calibration system





for this, but there's also a curious cardboard tower you can erect to balance it on.

The brand rates the power output of system at 132W all up: the subwoofer enjoys 100W, while the 16 beam drivers inside the CU2200 get 2W a-piece.

I auditioned the YSP2200 with both stereo and multichannel sources, music and movie, subjecting them all to Yamaha's multiplicity of listening modes. In its most basic stereo guise, the system predictably sounds a little funneled, and you can't engage any DSP processing while in this mode.

Shifting to a multichannel presentation sees the soundstage widen and here's where the post-processing fun begins. The CU2200 can decode all the standard lossy

and lossless sound formats used on DVD and Blu-ray, and by broadcasters, allocating channels to groups of beam drivers.

**The quality of these drivers is impeccable. They are tight, light and deliciously detailed. Ole Bull: Concerto Fantastico, a DTS HD MA 7.1 original mix from 2L, is as sweet as molasses.**

However, *The Pretenders: Live in London*, reveals some system limitations. A DTS-HD MA 5.1 mix, it seemed heavy-handed against its classical counterpart. This is because the woofer was required to do more work. But easing down the sub's output level proved the most effective way to constrain its somewhat splashy temperament.

What of the YSP's surround capabilities, though? Isn't all this talk of reflected sound just sonic snake oil? I found that with well executed movie soundtracks, such as the CG animation *Despicable Me*, this Yamaha system is able to create a horseshoe audio pattern that effectively flicks effects left and right. The result is genuinely cinematic.

In smaller rooms where there are hard surfaces for the sound projector to work off, the YSP2200 becomes a viable alternative to more

conventional speakers and sound systems. It certainly does a superior job to Samsung's HT-D670W all-in-one system which employs a pair of front-placed drivers to similarly bounce surround sound-effects off walls.

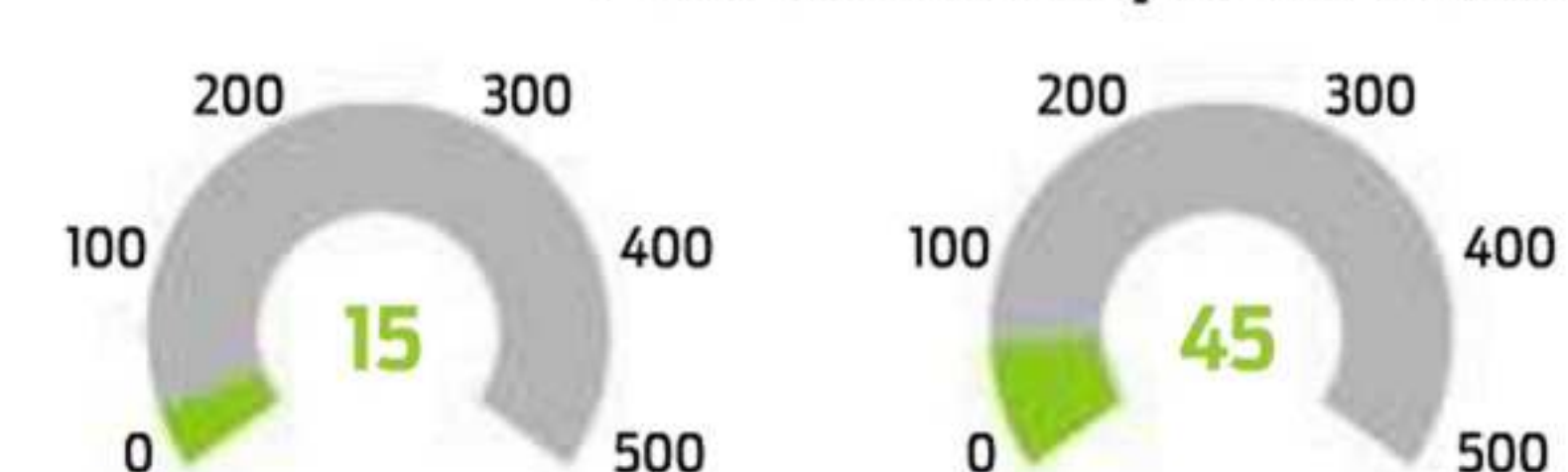
But there are inevitable compromises. While the system works wonderfully well with topky FX and string instruments, it struggles with more visceral audio. Ridley Scott's reworking of *Robin Hood* has plenty of sequences awash with clanging swords and thudding action. It's apparent during one such scene that the diminutive NS-SWP600 just doesn't have slam, usually a prerequisite for any gutty subwoofer. If you're looking for tight, fast bass you won't get it from the two 10cm cones employed here.

### Space-saving premium

While there's no shortage of soundbar products, all of which ostensibly look the same, none of them sound quite like a Yamaha Sound Projector. If you're looking for a space-saving alternative to conventional speakers and amplification, then the YSP-2200 is a compelling proposition. Of course, the quality of sound it creates and the ingenuity of its approach is reflected in the price tag. But, that said, it is a heck of a lot of fun.

### → Tech Labs

#### Power consumption: Watts



**Idling:** Power consumption when idling is minimal

**Playing:** Average consumption is quite low



### HCC VERDICT

Yamaha YSP-2200  
From £800 approx

**Highs:** Crisp, wide soundstage; surround effect works well in boxy rooms with reflective surfaces

**Lows:** The passive sub is splashy and lacks slam; not very immersive

Performance: 1 2 3 4 5

Design: 1 2 3 4 5

Features: 1 2 3 4 5

Overall: 1 2 3 4 5

**In the rack:** No one puts the CU2200 in a corner





54 OPPO BDP-93EU → £500 Approx → [www.oppo-bluray.co.uk](http://www.oppo-bluray.co.uk)



The sight of a new Oppo player should certainly please UK tech-hedz

# Oppo-tunity knocks

When it comes to image and audio quality, **Benny Har-Even** can't get enough of Oppo's new 3D Blu-ray player



**T**hey say the best things come to those who wait and in the case of Oppo's BDP-93EU, that most certainly is true. Having already forged a reputation amongst AV-holics for its high quality, yet affordable, upscaling DVD players, its debut Blu-ray player, the BDP-831, (*HCC* #175) impressed UK buyers at the end of 2009 before distribution issues spoilt the party. Fortunately, its successor, the BDP-93EU, is now available and shipping over here via a dedicated Oppo website, which, as we will find out, is jolly good news.

**Weight watcher:** The BDP-93EU is bigger and heavier than most modern BD decks

So why all the fuss? As many will recall, the Oppo BDP-831 was one of a rare breed of Blu-ray players that could play back almost every optical based format you could throw at it, with SACD and DVD-Audio adding lustre. The new BDP-93EU can, of course, do the same, but now adds 3D compatibility into the mix and promises even better video processing courtesy of Marvell's Kyoto-Gen 2 Qdeo chip.

Another welcome addition to the spec roster is DLNA network streaming, which bolsters the file

format playback from USB. While the US version of this player even includes Netflix and Blockbuster streaming, the EU model is currently devoid of any streaming services, although Oppo promises YouTube will be added at some point. In the meantime Google's Picasa image sharing site is available and worked well enough.

## In the bag

While I wouldn't normally go deep into the 'unboxing' experience, the Oppo's lavish packaging deserves a





## AV/CV

**Product:**  
Blu-ray player

**Positioning:**  
Mid-range, high performance

**Peers:**  
Cambridge Audio Azur650BD; Marantz UD5005; Yamaha BDS1067

mention and immediately imbues a sense of quality to the proceedings. You even get an Oppo-branded carry bag, should you want to lug the player over to your friend's house and want to attract the attention of muggers.

I also approve of the updated look of the player. The black brushed-metal fascia looks suitably impressive and will not seem out of place on a premium AV rack. As well as looks, the 4.9kg player has a solid heft to it that sets it apart from the budget crowd. This adds to the quality feel and bodes well for performance.

### Wizard of Op

Setup of the BDP-93EU proved effortless, with a wizard driving you through the basics, while a plethora of adjustments (including Hue, Saturation and Noise Reduction) are all available via a highly effective GUI that's navigable via the chunky, backlit remote with decent sized buttons. Easier still are three presets, and you can switch between them on the fly.

The front fascia is bare except for a display running down the centre, the power button and some

navigation controls, and nestling in the bottom right-hand corner there's a flap covering one of the two USB ports, with the other on the rear. Pleasingly, neither has to provide external memory for BD-Live content as 1GB of memory is built-in. Instead the USB port can be used more productively to play back content from a wide range of formats such as DivX, Xvid, MP4 and MKV. **I chose to use the rear USB port for the wi-fi dongle, which is included with the player rather than offered as an optional extra.**

Another potential playback source is a rear e-SATA port, though connected drives have to be powered to be recognised.

Other delights at the rear include an Ethernet socket for connecting to a wired network and the welcome addition of a secondary HDMI port. This can be used either to connect to video displays at the same time, or to enable you to enjoy full lossless sound from Blu-ray when using an older HDMI v1.3 amp – one HDMI cable going to the TV for picture, and the other sending audio to the amp for decoding.

## → Specifications

**3D:** YES  
**Upscaling:** YES all resolutions up to 1080p  
**Multiregion:** NO Region B BD/R2 DVD  
**HDMI:** YES two outputs, both v1.4a  
**Component:** YES 1 Output  
**Multichannel analogue:** YES 7.1 phono outputs  
**Digital audio:** YES Optical and coaxial  
**SACD/DVD-A:** YES/YES  
**Dolby TrueHD/DTS HD decoding:** YES/YES  
**Dolby True HD/DTS HD bitstream:** YES/YES  
**Profile 2.0:** YES 2GB internal storage for BD-Live  
**Dimensions:** 430 (w) x 311(d) x 79(h)mm  
**Weight:** 4.9Kg  
**Also featuring:** 2GB internal storage; 2 x USB inputs (one front, one rear); 1 x e-SATA; DivX, Xvid, AVI and MKV playback from USB and network; Pure Audio mode; Cirrus Logic CS4382A DACs; online firmware updates; Source Direct mode; Marvell Kyoto-G2 video processor with the second-gen Qdeo™ technology

Setting up the Oppo on my network via wi-fi proved child's play and, once done, pressing the Home button on the remote brings up the network options. This enables internet-based firmware updating, and proved very useful when, during the review process, an update added support for Synology NAS drives. ➤



## 56 REVIEWS



**Back panel beauty:**  
The Oppo offers gold-plated connections and 7.1 analogue audio outputs

Once the simple update completed, the player could see and play files from the drive over the network.

I found all my video test files played back flawlessly and could be scrolled through, crucially including MKV-wrapped files. Photos are supported and audio playback, too, although I was surprised to find that standard MP3s would not play. This is apparently down to licensing issues, which Oppo say should be resolved soon. Meanwhile, FLAC, WMA and Apple AAC MP4 files were fine, although Apple's lossless MP4s are not supported.

Moving to disc playback, the disc tray slid out smoothly and silently, confirming my impressions of solid build quality. My *Dark Knight* BD disc also went from 'tray open' to first video in a speedy 22 seconds – and our Tech Labs enjoyed similarly rapid results with their test disc, rating it one of the quickest spinners yet.

### Lush...

Once into the movie, I was treated to astonishing image quality. Pictures were free of any discernable noise, everything looked crisp and there was bags of visible detail in dark areas of the picture. Perhaps the best way to describe it is 'lush'.

Naturally, the deck is 24p capable, and my overriding impression was of a judder-free image, appreciably superior to that of my Sony PlayStation 3. This strong yet natural image pays dividends when watching 3D content, and on resident Samsung UE55C9000 test TV, the stereoscopic versions of *Ice Age 3* and *Avatar* played back flawlessly and have never looked better.

In terms of standard-def material, the player will upscale everything up to 1080p, courtesy of the Marvell Kyoto chip, and the results were of a high standard, with images free of any moiré or troublesome jaggies. Scrolling credits were all handled without any breakup. On balance, I preferred the Oppo's upscaling to the Anchor Bay

processing in my Marantz SR7005 receiver, which is high praise indeed.

Many potential fans of BDP-93EU will be interested in its audio performance. If anything, it was this that left the biggest smile on my faces. The presence of onboard decoding and full 7.1 phono connections on the back will enable users with older amps to enjoy lossless surround from DTS-MA HD and Dolby TrueHD, while as a music player, the 93EU is certainly no slouch. Cirrus Logic CS4382A DACs sit under the hood and I felt using these to feed the analogue outputs delivered slightly more warmth and tighter bass than HDMI. Our Tech Labs measured analogue audio jitter at a very low 188 picoseconds, which is an excellent result.

For those wanting to keep cabling simple the player can output native DSD from SACD into compatible receivers via HDMI, but while my Marantz receiver didn't support this, I still found myself absorbed by the detail and power of *Dark Side of the Moon* on SACD and *The Beatles Love* on DVD-Audio.

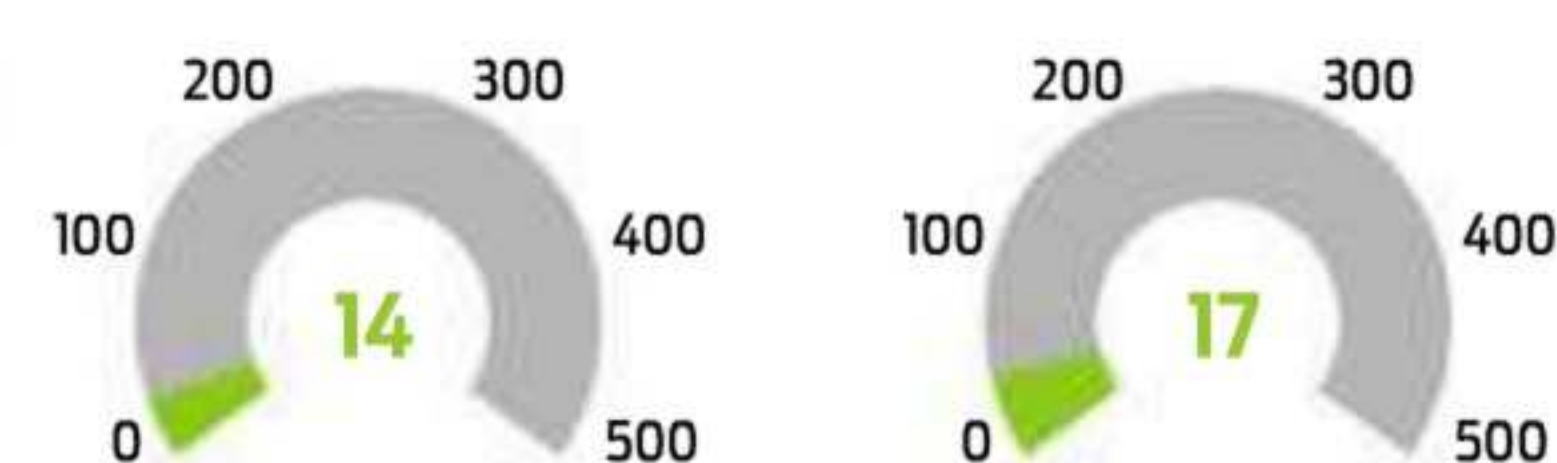
While **a Pure Direct mode can also defeat the display light and video circuitry to further reduce distortion**, true audiophiles might wish to save their pennies for the forthcoming higher-end BDP-95EU, which will offer even better DACs and balanced XLR connections.

### Easy to recommend

For both Blu-ray and audio this is a clearly a near-reference quality deck, and as such offers outstanding value for money. The online portals may be lacking compared to mainstream rivals, but where it really counts, in picture and audio quality, and disc compatibility, the BDP-93EU is a very attractive and highly recommended proposition. For the money, it's nothing less than a bargain. Fingers crossed that the Californian brand hangs around the UK a little longer this time...

## → Tech Labs

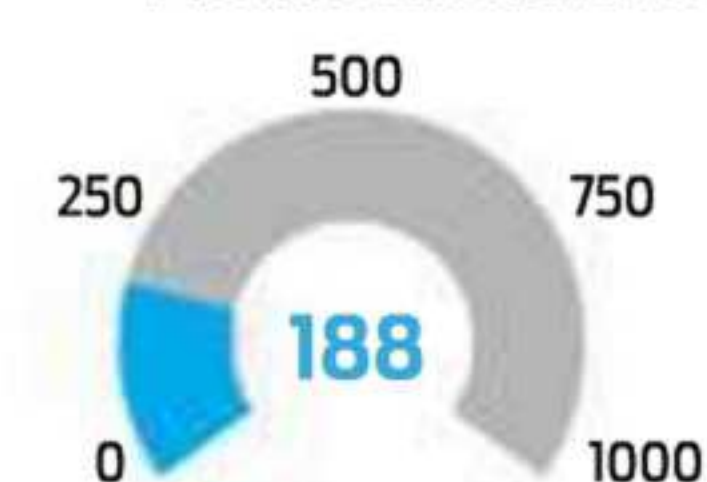
### Power consumption: Watts



**Idling:** Compared to the latest Far Eastern models, this BD player is pretty power hungry

**Powered:** Only a 3W increase when spinning a platter, though

### Audio Jitter: Ps



**Sound:** A hi-fi class result. Will be interesting to see how the 'upgrade' model fares, which boasts audiophile tweaks

### Loading: Boot/Java

**Boot speed & tray eject**

**3s**

**Tray in to main BD menu**

**37s**

### Disc loading & Java:

Fast to boot up and load our test platter



## HCC VERDICT

Oppo BDP-93EU  
£500 Approx

**Highs:** Solid build quality; fast disk loading; superior audio quality; near reference picture quality.

**Lows:** MP3 playback absent; lacklustre online content options

Performance: 1 2 3 4 5

Design: 1 2 3 4 5

Features: 1 2 3 4 5

Overall: 1 2 3 4 5



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# The buffering slayer

**Adrian Justins** tries a networked media player that saves buying a new TV



## One-stop shop:

Part VOD device, part media player

The DPS-1000 is aimed at anyone who wants the benefits of a connected TV. It's not the neatest-looking solution (think doorstep sandwich with ventilation holes), but it's more affordable than replacing your main TV, and at least its black plastic fascia looks classy.

There are two USBs on the back, but no digital audio output. One USB can be used for hooking up a Flash or hard drive, with the other allocated for a keyboard or wireless dongle. Call 0835 519 2367 to buy a compatible dongle for £19.99, or alternatively, you could simply use powerline adaptors.

In terms of its media features, the DPS-1000 is a fairly simple and effective proposition: internet TV in the shape of YouTube, Flickr, etc plus direct access to iPlayer, LOVEFiLM and BlinkBox, so you have a broad selection of free, subscription and

## AV/CV

**Product:** Networked media streamer with VOD built-in

**Positioning:** Digitalstream's first Smart TV device

**Peers:** Boxee Box by D-Link

pay-per-view, ondemand video content. This is complemented by DLNA networking, a palette of news and current affairs widgets, social networking (Twitter and Facebook), plus a full internet browser, although the web function here was inexplicably declared unavailable.

## Slinky Onyx

The Onyx operating system, which appears on some Cello iViewer TVs, is a clever hybrid of Sony's X-Media Bar and some of the slinkier efforts from the likes of Samsung and Humax. With decent-sized icons, legible fonts and tasteful backgrounds, it's quick and easy to navigate and suffers only occasional delays when loading some screens.

The home screen shows the active media type (iPlayer, Blinkbox, DLNA, etc) with a news widget that automatically scrolls through 10 stories of about 20 words each. The default widget can be changed in the settings menu or you can manually scroll vertically and choose from the weather, sport, Twitter or Facebook.

Only the remote control mars the user experience. It's ugly and doesn't balance well in your hand. Worse, it suffers from tiny, cramped buttons that are hard to find in low light.

**The iPlayer application works fantastically well and includes access to HD shows.** Thanks to adaptive

streaming technology, you get a slight drop-off in quality rather than annoying pauses for buffering from a slow connection. Even on my

miserable 2MB BT pipe, image quality was good on a 40in screen, albeit a touch soft.

BlinkBox appears to offer a capacious vault of movies and TV shows, but on closer inspection, it transpires that many of them aren't yet available.

As a media player, the DPS-1000 feels primitive. It may be DLNA endowed, but it can only access Windows Media Center files on a PC and file compatibility is limited. It played MP4, MPG and DivX files okay, produced mute pictures on an .MKV and wasn't interested in my .m2ts Blu-ray rip. The lack of a digital audio output is annoying for anyone without an HDMI-equipped AVR.



## HCC VERDICT

Digitalstream DPS-1000  
£90 Approx

**Highs:** Slick interface, good mix of free and paid content, good video streaming quality

**Lows:** No separate digital audio output; not wi-fi out of the box

**Performance:** 1 2 3 4 5

**Design:** 1 2 3 4 5

**Features:** 1 2 3 4 5

**Overall:** 1 2 3 4 5

## → Specifications

**Upscaling:** YES to 720p/1080i

**HDMI:** YES 1

**Ethernet:** YES

**Wi-fi:** via optional dongle

**USB:** YES x2

**DLNA networking:** YES

**VoD services:** iPlayer; BlinkBox;

LOVEFiLM

**Dimensions:** 170(w) x 35(h) x

175(d)mm

**Weight:** 0.4kg

**Features:** YouTube, Flickr, Facebook, Twitter; BBC News widgets; Scart; MPEG-1, Dolby Digital, AAC+, WMA audio decoding; MPEG1, MPEG2, MPEG4 AVC/H.264, VC1, WMV9, MP@HL video decoding; 12V DC input; 11W power consumption; 0.5W standby



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60 PANASONIC TX-L37DT30 → Approx £950 → [www.panasonic.co.uk](http://www.panasonic.co.uk)

This 37in LED TV features 3D support and advanced networking features

### → Specifications

3D: YES Active Shutter Full HD: YES 1080p/24  
 Tuner: YES Freeview HD, Freesat HD,  
 Component: YES HDMI: YES four v1.4 Resolution: 1,920 x 1,080  
 Sound: 2 x 10W Brightness: Unclaimed  
 Contrast ratio (claimed): 'Brilliant Contrast'  
 Dimensions (w/o stand): 874 x 536 x 72 mm  
 Weight (w/o stand): 12.5kg  
 Features: 3D Ready (Active Shutter glasses required);  
 Top and Bottom edge-lit LED; 400Hz Intelligent  
 Frame Creation; USB for media playback (JPEG, MP3,  
 AAC, WMA, AVI, AVCHD, MKV support); VIERA  
 Connect Video Portal featuring YouTube; Daily Motion  
 and more; Ethernet connection; VIERA Link CEC,  
 ISFccc mode



### AV/CV

**Product:** 3D LED LCD TV with VIERA Connect IPTV and apps portal

**Positioning:** The first 3D LED LCD TV offering from Panasonic tops a growing range of LED options

**Peers:** Sony KDL-40NX713; Samsung UE37D6510



# 3D for the second room

The world's best-selling plasma TV brand now offers a high-spec 37in 3D LED TV. **Steve May** wonders what to expect next



**H**aving wowed us with its first-generation 3D plasmas, Panasonic is now hoping to broaden its appeal with some 3D LED models that push three dimensionality onto ever smaller screen sizes. The 37-inch reviewed here sells alongside an even smaller 32in 3D model.

Of course, the TX-L73DT30 isn't just about 3D. This set also has two HD tuners, one for Freeview and another for Freesat, for maximum hi-def viewing flexibility, as well as considerable Smart TV credibility in the form of VIERA Connect.

Build quality is appreciably better than that of the cheaper (2D) E30 LED TVs; I really like the titanium trim and black glossy frontage combo. Other differences include a slightly modified pedestal stand, now with swivel action.

You get a pair of USB inputs to toy with, and if you don't have a wired network connection in your viewing room, you might want to use one of these for the brand's dedicated wi-fi dongle, the DV-WL10, and the other for its TY-CC10 HD Skype webcam. Helpfully, a third USB port is provided on the left hand side of the screen for media playback. It sits alongside a fourth HDMI input, phono AV inputs and SD card reader.

It's good to see that Panasonic has revamped its user interface for 2011. There's now a giddy flourish to the main menus, while the shortcut VIERA Tools bar provides quick

navigation to media, be it on your network or local USB.

The TV guide is rather less attractive, compromised as it is by an ad banner. Interestingly, these come not from Panasonic, but Gemstar's GUIDE Plus+ system which powers the listings. You cannot disable them.

## Net-tastic

As a network-aware TV, the TX-L37DT30 is first class. Broad DLNA compatibility meant that the screen found all my NAS and PC streamers automatically. It can also access content from the brand's 2011 DIGA DVD and Blu-ray recorders.

Video file playback support covers AVCHD, AVI, MPEG2 and MKVs. When it comes to audio support, the TV also recognized MP3, AAC and WMA, and played tunes with album art and artist/track metadata displayed.

**The TV can even record to a USB-connected hard drive. I hooked up a 250GB Seagate Freeagent Go and was soon time-shifting on the cheap.** This poor man's PVR

solution is easy to use, but comes with a few operational restrictions. Once you've started to record a programme, you can't switch to another channel (or tuner for that matter), or browse the VIERA Connect service. You can, however, chase playback, and it's probably best to use this function as a back-up

recording device when you're out or on holiday. Alternatively, you could just use it as a cache to pause live TV (just select the appropriate option in the menu).

## Light up your life

Although it sits further up the ladder in Panasonic's screen hierarchy, this model impressed me less than the E30 2D LED set. Unlike the cheaper screen, the DT30 has top and bottom LED edge lighting. The most obvious consequence is a rather uneven spread, with light pooling in each corner. Panasonic's IPS Alpha screens have always had a reputation for superior off-axis viewing, but that seems to be undermined here. Provided you stay square on, colour and contrast remain strong when viewed from the side. However, there's less vertical latitude before the image bleaches out entirely.

Black levels are acceptable but not profoundly so. Night sequences lack shadow nuance, particularly when viewed in a darkened room.

The set boasts the 400Hz variant of the brand's Backlight Scanning Intelligent Frame Creation Pro system, designed to minimize image blur. You have the option to run with IFC set to Off, Mid or Max. When feeding the set with 1080p24 material, this setting morphs to 24p Smooth Film, with the same results.

Turn IFC Off and you'll encounter no image artefacts, but the cost is a



## 62 REVIEWS



**Go with the flow:** Panasonic's IFC motion smoothing tech works best on its Mid setting

motion resolution of less than 600 lines. With IFC on Mid, moving picture clarity returns to 1080 lines. While this does create some artefacts, seen as smudgy rings around certain moving objects, they're low key and not particularly intrusive. With IFC on Mid, a scrolling resolution test of Japanese and English text, at different font sizes, remained extremely clean.

Switching IFC to Max brings ringing artefacts to the fore, with no additional benefits. This level of aggressive picture processing should be avoided.

In terms of overall picture quality, HD image performance is compelling with well-lit subjects. Standard-def material is a little less pleasing. Some low-bitrate Freeview channels, including BBC News 24, come across as scrappy with copious, fidgety microblocking. That said, as more services migrate to HD this will become less of an issue.

If you'd been expecting Panasonic's debut LED 3D screens to succumb to the kind of crosstalk double imaging which has plagued rival LCD screens, you'll be disappointed. **The set's 3D performance is pleasingly clean. There is crosstalk to be found, but it's subdued to the point of being almost inconsequential.**

The opening sequence to *Resident Evil Afterlife* (Blu-ray) looks wonderful on the TX-L37DT30. With slow motion rain beating down into the heart of Tokyo (tiny droplets bounce

off the credit titles) there's a tangible sense of depth to its 3D presentation. Panasonic recommends sitting approx 3.2m away for optimum effect. Personally, I think that's way too far for a screen of this size. With 3D I always feel the need to move closer to the screen than during normal 2D viewing, probably because there's no perceivable screen plane to judge distance by.

### Save up for spex

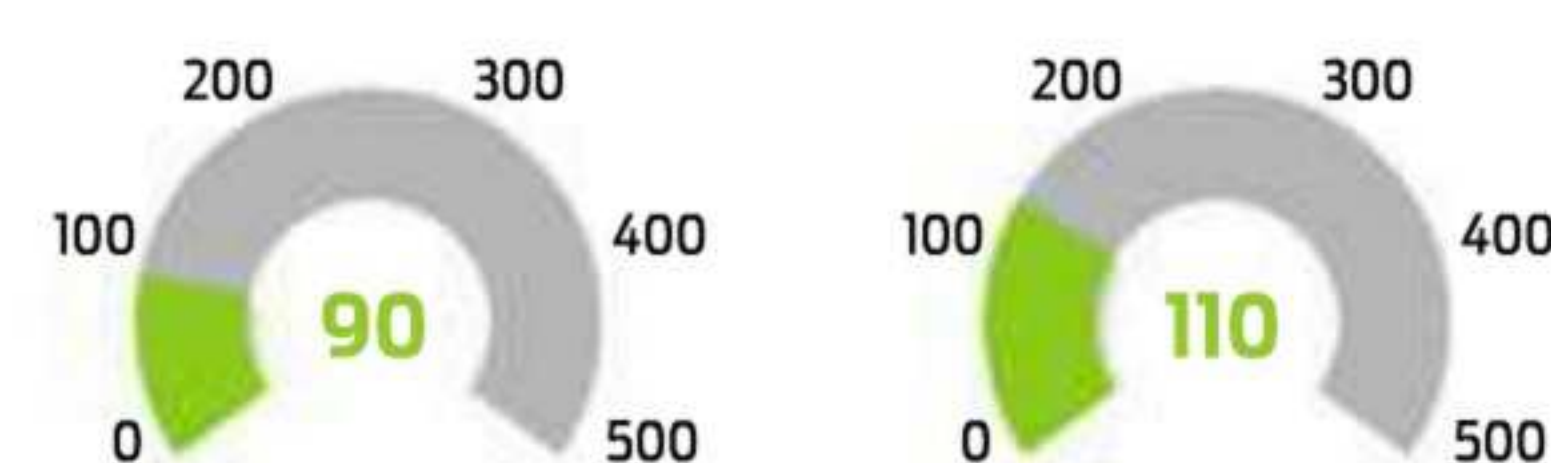
Frustratingly, no Active Shutter glasses are provided with the set. You'll need to budget for these separately (at a not inconsequential £130 a pair). For this audition, I used the brand's new TY-EW3D2LE spex. These are a far more successful than earlier Panasonic eyewear, being less susceptible to reflections and flicker from other light sources. The glasses automatically turn off to conserve energy if no 3D signal is detected after five minutes.

Overall, the TX-L37DT30 is an impressive LED offering. It shares the same excellent networking talents as the cheaper E30 range, and VIERA Connect is an IPTV portal with genuine promise.

Perhaps controversially, I think the cheaper E30 is the more enjoyable 2D telly. Its backlight execution is more uniform, there's less noise and it has a wider off-axis viewing range. The lack of a really convincing black level seems more acute here as well. But if you're looking for a do-it-all 3D capable thin-screen, it's well worth an audition ●

## → Tech Labs

### Power consumption: Watts



**White screen:** Quite high for a set this size, but drops to 50W in a darkened room when the auto brightness feature is enabled

**Test footage:** Uses an average of 110W with movie footage (and audio engaged)

### TV Contrast: Ratio



**Picture:** A healthy contrast ratio of 344,000:1, and a good luminance figure of 100fl, in normal mode

### Colour accuracy



**Presets:** ISFccc controls are available, but the Warm preset is spot on  
**Cool:** 12,500K  
**Normal:** 7,600K  
**Warm:** 6,500K



## HCC VERDICT

Panasonic TX-L37DT30  
£950 Approx

**Highs:** First class network media support; VIERA Connect IPTV store; motion resolution; effective 3D  
**Lows:** Poor vertical off-axis viewing; limited black level; no 3D glasses

**Performance:** 1 2 3 4 5

**Design:** 1 2 3 4 5

**Features:** 1 2 3 4 5

**Overall:** 1 2 3 4 5





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# Mighty miniatures

Canton may be a company with a large reputation, but it understands small speakers, nonetheless. **Ed Selley** gets to grips with the dinky Movie CD 105

Canton has been making sub/sat packages for as long as the concept has been a recognised phenomenon. Its current Movie range features no fewer than 10 separate packages, of which the £500 CD 105 tested here is towards the lower end of the price structure – although there are less expensive models than this.

Arriving in a single box, the CD 105 is nothing if not compact. The package consists of four dinky satellites, each fitted with an 3in main driver and a 0.6in tweeter; a dedicated centre speaker with a pair of the 3in drivers to better handle the task of getting dialogue to the listener; and a 100W, 8in long-throw subwoofer. The sub is considerably larger than the satellites, but still relatively compact. The review sample came in black, but silver is also available.

The satellites are sturdy and well built, and the finish is smart and unobtrusive. A nice touch are the wall mounts for all five satellites and an easy-to-assemble and attractive floorstand.

After substituting the push-post style bare wires for plugs, setup was simple, and the satellites are completely unfussy about how or where they are placed. **This has to be one of the simplest packages to integrate into the average lounge** – apart from the even less demanding virtual surround designs. The best relationship between sub and satellites was achieved with the subwoofer on axis with the front speakers. A 90Hz crossover gave the best results between supporting the satellites without the low end becoming too obviously directional.

For a relatively small system, the CD 105 proves surprisingly potent in use. The heavyweight soundtrack of *Unstoppable* is handled with confidence and considerable reserves of energy. The satellites are able to keep dialogue clear and

distinguishable from the train-related mayhem, and incidental details are easy to pick out without the greater sense of the soundtrack itself being lost. The sub is not the most agile of devices, but the impact of the train with the various objects

in the way is reproduced with laudable slam and attack. Close your eyes while listening to the Cantons and they manage to sound much larger than they are, which is surely the trick that any sub/sat system is looking to pull off.



## AV/CV

**Product:**  
5.1 sub/sat  
system for  
smaller home  
cinemas

**Position:**  
Mid-to-low  
range in the  
Movie series

**Peers:**  
Cambridge  
Audio Minx;  
Klipsch HD  
Theater 500;  
B&W MT25



Room fillers

The Cantons can fill a 5 x 4m room with a 3m-high ceiling and, just as importantly, there is no sense of five distinct points of sound. The sats combine to provide a strong frontal soundstage with commendable handover between front and rear. Effects placement is assured and extends a considerable distance from the speakers. Quite how much larger a room the Cantons will fill is unclear, but an average lounge should not be beyond them. The satellites are not hugely sensitive, but their impedance response is good and the power handling of 100W means that they can be driven to impressive levels and remain smooth and fairly refined.

**Magic act:**  
The small cabinets deliver a surprisingly big sound

Music-wise, the Canton system is more convincing than many other

sub/sat packages, but the weakness is still the amount of work the woofer is being asked to do. The same explosion-filling grunt it possesses is less effective when being asked to follow fast or complex bass lines. More relaxed music is better presented, but there is still a slightly lumpen sense to low notes. This is a shame because the satellites are extremely impressive with vocals and once again manage to produce a soundstage that is remarkable for a 13cm tall speaker.

So while not perfect with music, the Canton CD105's ability with film soundtracks more than compensates. For those with small-size cinema rooms and meagre budgets, this system is worth auditioning ●

→ Specifications

Satellite

**Drive Units:** 1 x 3in aluminium cone bass driver; 1 x 0.6inmm aluminium tweeter  
**Enclosure:** Sealed  
**Frequency Response:** 80-25kHz  
**Sensitivity:** 85dB  
**Power Handling:** 100W  
**Dimensions:** 90(w) x 135(h) x 100(d)mm  
**Weight:** 1kg

Centre

**Drive Units:** 2 x 3in aluminium cone bass driver; 1 x 0.6in aluminium tweeter  
**Enclosure:** Sealed  
**Frequency Response:** 80-25kHz  
**Sensitivity:** 87dB  
**Power Handling:** 100 W  
**Dimensions:** 400(w) x 188(h) x 256(d)mm  
**Weight:** 1.7kg

Subwoofer

**Drive Unit:** 8in long-throw, forward firing  
**Enclosure:** Ported  
**Frequency Response:** 33Hz-140Hz  
**On board power:** 100W  
**Dimensions:** 240(w) x 420(h) x 425(d)mm  
**Weight:** 10.4kg



HCC VERDICT

Canton CD 105  
£500 Approx

**Highs:** Well built and potent sounding speaker package with very flexible placement

**Lows:** Performs better with films than music; not for large rooms

**Performance:** 1 2 3 4 5  
**Design:** 1 2 3 4 5  
**Features:** 1 2 3 4 5

**Overall:** 1 2 3 4 5



# Slingbox is reborn

You can now watch Freesat channels on the move with the first Sling-loaded PVR. **Steve May** travels with his telly

When Slingbox first launched, placeshifting, as it quickly became known, was a technology to watch out for. Everyone got excited about the idea of using the internet to stream video from their home recorder. Even Sony tried to jump onboard with its own short-lived implementation. Sling found a niche of sorts, but never went mainstream. People started to watch YouTube instead. Now the concept is back, hitching a ride on the coat-tails of a 500GB Freesat+ recorder. The result is the HDS-600RS reviewed here – the world's first Sling-loaded PVR.

## Distinctive design

As with previous standalone Sling-based products, the design of the HDS-600RS is unconventional.

I rather like it, but accept it won't be to everyone's taste. The distinctive sloping sides and indentations are accentuated by a line of red soft-touch controls dominating the fascia. The rear of the unit is more conventional. Here you'll find two satellite F-connectors, twin Scarts, an HDMI out, Ethernet, digital audio and stereo phono audio outputs. The receiver actually has two USBs, one of which is very visible on the front panel, but they can only be used for firmware updating.

The user interface is simple, but elegant. Hitting the Sling button on the remote pulls up the main menu, a neat graphical navigation bar which takes you to TV listings, favourite channels, library recordings, general settings and apps (the latter cupboard is a little bare).

## AV/CV

**Product:**  
500GB  
Freesat+ PVR  
with Slingbox  
functionality

**Positioning:**  
The only  
set-top box  
with integrated  
placeshifting

**Peers:**  
Humax  
Foxsat HDR;  
Samsung  
SMT-S7800

As with any current Freesat receiver, you can access BBC iPlayer. It lurks on channel 901 and is also accessible via the Red button. At some point this will be joined by ITV Player. However you must have your box online via Ethernet to get it.

Usability is good. The Freesat EPG itself offers a standard genre shortcut in addition to the main channel guide. There's a short pause when you move to the TV listing as it builds each channel list. There's no Live TV thumbnail window with the TV listings, although audio does continue underneath.

Conveniently, the remote controller itself is smart enough to be able to clone the control codes from your TV's handset.

The HDS-600RS has a 500GB hard drive, and given the dearth of





HD programming currently available on Freesat, this is going to enable you to timeshift a lot of shows (around 300 hours of SD-quality content).

Image quality from Freesat's channel bouquet can be uneven, as there are a fair few channels using a limited bitrate. However, this is balanced by some decent SD channels and a smattering of much nicer hi-def content (from BBC One HD, BBC HD, ITV1 HD, NHK HD).

So far, so PVR – what makes this box interesting is the Sling integration. Echostar calls it 'TV anywhere'.

Clearly, having placeshifting functions built straight into a set-top box is an inspired idea. It means **you can watch live TV and what's recorded on your HDS-600RS from either a PC or laptop, or a mobile iOS/smartphone device**, without having to hook up extra gizmos. Basically, you can tune in anywhere there's an internet connection, be it from your bedroom or a hotel room a continent away.

To test the box's remote viewing option, I used an iPod Touch and the SlingPlayerMobile app, which sells for £18 on iTunes. It's a high premium to pay, but is central to the appeal of the unit.

Taking control via this app proves a little bit clumsy; it doesn't have the best interface and the lag between

command and execution can be confusing (trying to conduct a Search on the BBC iPlayer proved all but impossible). But the novelty of catching up on the previous night's recorded TV in a wi-fi hotspot should not be underestimated.

### Fuzz factory

Although I used an iPod Touch, there is an iPad app as well. Frankly, the smaller screen of the Touch struck me as the better option, because picture quality streaming from the box is merely functional. The Sling system adjusts its video coder based on the speed of your net connection, but even uploading from a fibre optic network, I found the picture borderline fuzzy.

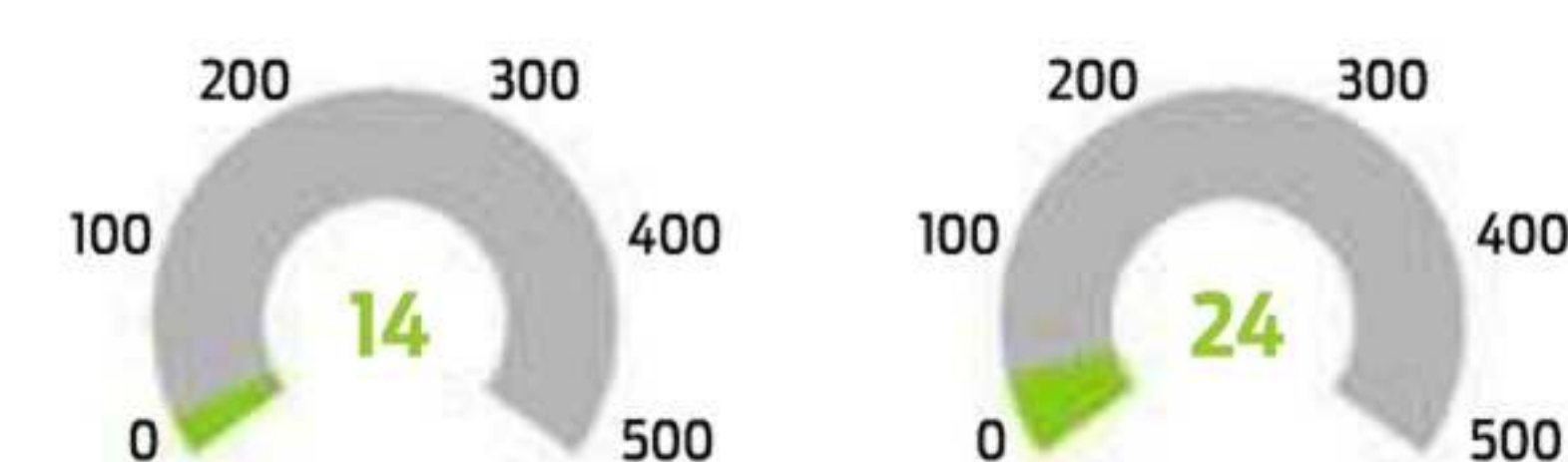
This generally unpolished video performance is largely unchanged since the last time I encountered a Slingbox, so while I'm sure things have progressed significantly under the hood, it's still a disappointment.

As a standard PVR, the HDS-600RS is absolutely peachy. Picture performance on the box (both live and recorded) is perfectly acceptable, and it's easy to use. However, it's the integration of Sling's 'TV anywhere' tech that really makes it stand out from the crowd.

If you're looking for a Freesat recorder with a difference, then the HDS-600RS delivers. Wherever you happen to be ●

### → Tech Labs

#### Power consumption: Watts



**Standby:** A high figure, but in 'Deep Standby' usage drops to 1W

**Playing:** With a single LNB feed, power use is quite high

### → Specifications

**HDD/PVR:** YES 500GB

**Tuner:** YES twin Freesat+ HD tuners

**HDMI:** YES, one output with HDCP support

**Component output:** NO

**Digital audio output:** YES

**Phono audio output:** YES

**Dimensions:** 386(w)x 280(d) x 58(h)mm

**Weight:** 3.86kg

**Also featuring:** TV and genre EPG; series linking; 2 x USB; Ethernet; learning remote; integrated Slingbox for 'TV anywhere'

#### Red setter:

The design won't be to everyone's taste, but we like it



### HCC VERDICT

Echostar HDS 600RS  
£350 Approx

**Highs:** A solid PVR performance; easy to use; integrated Sling Placeshifting functionality

**Lows:** SlingMobilePlayer app is expensive; poor quality streamed images to mobile devices and PCs

**Performance:** 1 2 3 4 5

**Design:** 1 2 3 4 5

**Features:** 1 2 3 4 5

**Overall:** 1 2 3 4 5





# Import duty

**Martin Pipe** gives his verdict on Sharp's first DLP 3D projector and makes a case for its appearance on these shores

When asked by Sharp if we wanted to audition its 3D projector, we weren't about to say no, even though the machine hasn't yet been confirmed for a UK release. Oddly, Sharp is prevaricating about whether there's a market for a 3D PJ with a retail price of around £4,000. But AV retailers' shelves aren't exactly heaving with such items. There's only Sony's VPL-VW90ES (£5,400) and a trio of JVC models, ranging in price from £3,500 to £9,500. And that's currently it.

## DLP-crazy

Given Sharp's expertise in the LCD field, I was surprised to discover that the full HD XV-Z17000 eschews LCD technology in favour of DLP. The

company has combined a single 0.65in DLP chip with a 5x speed six-segment colour wheel. In the past, such an arrangement was noticeably inferior to the three-chip approach; artifacts (including the 'rainbow effect') could be rather obtrusive on occasions. But the technology has been refined greatly in recent years, so such nasties aren't as problematic as once they were.

The XV-Z17000 uses active-shutter glasses. Two pairs were supplied with our sample. Shuttering is triggered by the large array of infra-red LEDs bouncing off the screen towards the viewers' glasses.

The lens, which can be protected by a sliding panel when not in use, is a 1.15x zoom type. Unfortunately, for

those with more modest sized viewing rooms, it has a longish throw for a home projector; if you're after a 3m (diagonal) 16:9 picture, the projector needs to be approximately 4m away from the screen. Zoom and focusing adjustment involves turning sections of the lens barrel. If you're placing the projector on a flat surface, the front-mounted feet help you align the picture with the screen.

Other setup features, such as vertical/horizontal keystone correction (electronic rather than optical) and projection type (front/rear/desktop/ceiling) are menu-driven. Sharp's onscreen displays are comprehensive, and can be operated from a control panel set into the top of the PJ and a dinky

## AV/CV

**Product:**  
Single-chip  
DLP full HD  
3D projector

**Positioning:**  
The only such  
model in the  
Sharp lineup

**Peers:**  
JVC DLA-X3;  
Sony VPL-  
VW90ES  
(£5,400)





Active shuttering is triggered by the front-mounted, infra-red LEDs

### → Specifications

**3D Ready:** YES **Full-HD:** YES 1080p24  
**Component video:** YES one set of inputs  
**HDMI:** YES 2 x v1.4 **PC input:** YES 1 x 15-pin/D-Sub  
**12V trigger:** NO **Resolution:** 1,920 x 1,080  
**Brightness (claimed):** 1600 ANSI lumens  
**Contrast ratio (claimed):** 40,000:1  
**Dimensions:** 400 (w) x 100 (h) x 335 (d) mm **Weight:** 5.8kg  
**Features:** Single-chip DLP with 5x 6-segment colour wheel; image size 40in - 500in; IDT ReonVX-210 video processing; F2.5 - 2.7 lens; manual zoom (1.15) and focus; 6 user-configurable picture presets (standard, natural, dynamic, movie 1, movie 2, game); colour management; noise reduction; multi-standard; digital keystone adjustment

handset with faintly glow-in-the-dark controls.

Rather more beneficial is the inclusion of a selection button for each input and Sharp has catered for most eventualities here. The upscaling of standard-def sources is handled internally by an IDT ReonVX-210 'on a chip' system.

The menu system gives a selection of six picture presets, all of which can be customised for each input. In addition to contrast, brightness and colour saturation are the ability to adjust red/blue level, colour temperature, iris mode, gamma and colour management. An 'eco-mode' reduces the brightness of the picture, but lamp life and black levels benefit. A separate menu

covers 3D parameters, such as depth adjust and format selection.

### The rainbow is over

Out of the box, pictures were surprisingly good, although a basic calibration slightly improved black levels and shadow definition. **Contrast range and brightness exceeded my expectations, while rainbow distractions were negligible.** Colour reproduction fared better than many single-chip DLP projectors I've tried previously. Saturated colours, which feature prominently in animated movies such as *Legend of the Guardians: The Owls of Ga' Hoole* were handled with finesse. This particular movie is also awash with detail, all of which the XV-Z17000 took in its stride. Non-CG material gave me no cause for concern either, with realistic textures and skin-tones.

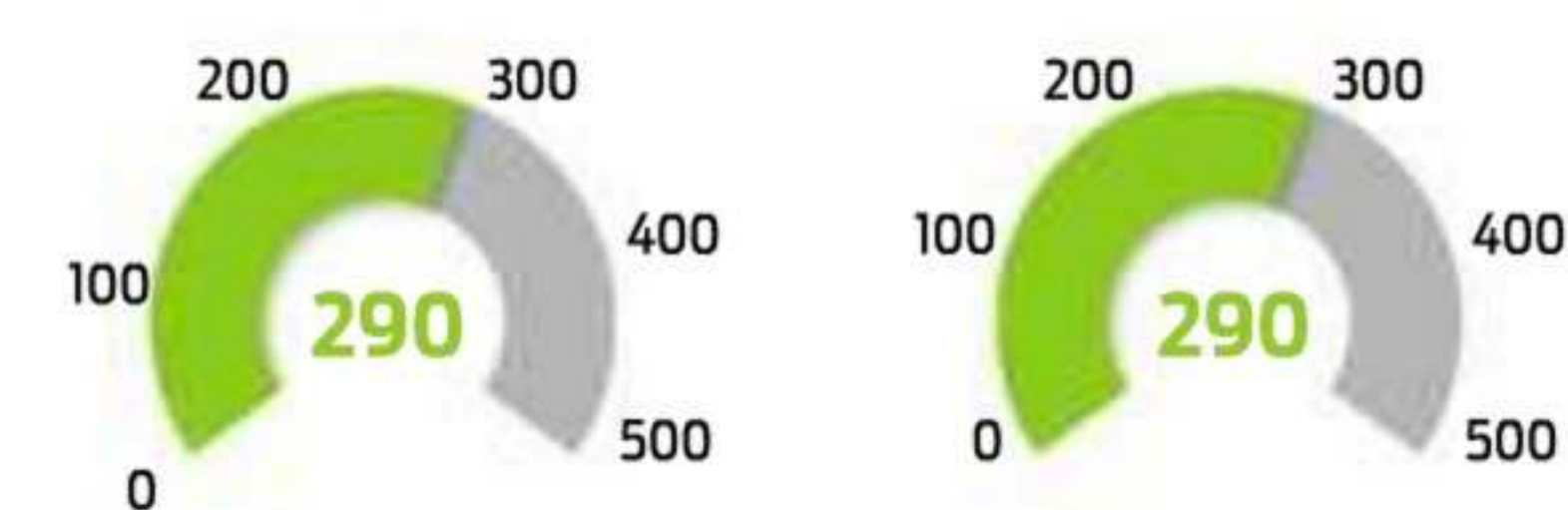
Movement was film-like, as opposed to being unnaturally fluid. I noted some slight judder with vertically-scrolling captions, but that was all. Standard-def TV and DVDs are scaled impressively, according to their limitations.

And so to the third dimension. With *Avatar 3D*, I immediately noticed that the picture was darkened; Sharp hasn't compensated for the attenuation of light level caused by the glasses. I recommend a tweak of one of the picture presets specifically for 3D use. There's a 'bright boost' function buried in the menus, but I'm puzzled as to why this isn't automatically engaged or at least placed in the 3D menu. This aside, the XV-Z17000 gave a good account of itself. Depth and perspective are evident – *Avatar's* opening space-station sequence is a great demo here – while crosstalk didn't detract from my viewing experience. Indeed, a run-through of the opening sequence of *Monster House* showed no sign of double imaging on the trees in the background, which other 3D displays often throw up. Nor is a tangible 3D effect exclusive to a narrow viewing angle.

Overall, Sharp's projector is an interesting competitor to JVC's slightly cheaper X3. Its picture quality is good, and the 3D effect is engrossing and easy on the eye. While the lack of a 12V trigger might annoy installers, the integrated 3D transmitter and smaller build make it more plug 'n' play. Should Sharp bring it to Blighty? Yes. Particularly if it can lower the price by a few hundred quid ●

### → Tech Labs

#### Power consumption: Watts



**White screen:**  
A higher than expected power consumption, but activating Eco mode lowers it to 225W

**Test footage:**  
The lamp is at the same brightness, regardless of picture content

#### Contrast: ratio



**Picture:** Below spec, but a commendable contrast measurement, with the Movie 1 preset, although luminance, at 6.5fL, is low

#### Colour temp: Kelvin



**Presets:**  
Colour temperature can be adjusted for 6500K via red/blue white-point control  
**Natural:** 7,600K  
**Movie 1 (-2):** 5,600K  
**Movie 1 (-1):** 6,700K  
**Movie 1 (0):** 7,800K  
**Movie 1 (+1):** 8,600K  
**Movie 1 (+2):** 9,600K



### HCC VERDICT

Sharp XV-Z17000  
£TBA

**Highs:** Decent 2D and 3D performance; quiet; free of rainbow effect and little crosstalk

**Lows:** 4:3 mode unavailable with HDMI-connected source; no optical keystone correction

**Performance:** 1 2 3 4 5

**Design:** 1 2 3 4 5

**Features:** 1 2 3 4 5

**Overall:** 1 2 3 4 5



70 TVONICS DTR-Z500HD → £230 APPROX → [www.tvonics.com](http://www.tvonics.com)

# Looping the loopthrough

**Adrian Justins** reviews a 'bot that remembers viewing habits

How do you stand out in the crowded Freeview HD PVR market? Excluding media streaming and DLNA networking is hardly in keeping with the Freeview zeitgeist, but the DTR-Z500HD boasts a couple of handy features that look compelling. One is a built-in HDMI switcher and two, it can make basic, TiVo-style recommendations based on your recording history so long as metadata is provided by each broadcaster for the shows you choose to record.

## Highs

- The slickly-designed user interface makes this box a pleasure to use. The fonts and colour scheme are attractive, and navigation between menu screens is fast and logical, although programme information is basic. The remote control is classy despite some titchy buttons.
- HDMI switching is handy if your TV



**Switch bitch:** the unit can automatically swap between HDMI sources

is short of inputs or you just want to make things look neater by routing one HDMI into your screen. The box simply acts as a loopthrough – it can't process the HDMI audio feed.

- Picture quality is right on the money, especially the four HD channels, and with a built-in 1080p upscaler even standard-def Freeview looks about as good as it gets.

## Lows

- The Ethernet port is part of the

Freeview spec, but there's no compulsion to use it so here it's simply using up real estate on the rear panel.

- There are two USBs, one at the front and one at the back, but media playback extends only to JPEGs. The inability to show movie clips is frustrating to say the least.
- AAC/Dolby Plus signals are transcoded to Dolby Digital, but only Dolby Digital and Dolby Digital Plus broadcasts will output as 5.1; so depending on the format being used for broadcast, you may or may not get vital metadata (such as audio description on BBC HD Freeview, which is broadcast in Dolby Digital).

## HCC VERDICT

TVonics DTR-Z500HD  
£230 Approx

Overall: 1 2 3 4 5

AVERTV VOLAR HD → £30 Approx → [www.avermedia.com](http://www.avermedia.com)

# Only half the picture?

An HD tuner for PCs for £30? **Martin Pipe** discovers the catch...

This neat dongle adds terrestrial digital TV reception to a Windows PC. But let's get one thing straight from the beginning – the packaging (and product name) may suggest HD happiness, but the tuner is DVB-T only. Some other countries use the DVB-T standard for HD broadcasting, and the AVerTV Volar HD may well be ready for them. But in the UK, it's

SD-only folks – although manufacturer AVerMedia has said it will release DVB-T2 standard devices in the second part of this year.

## Highs

- The supplied AVerTV software installed without a hitch and works well. It supports the H.264 codec commonly used for HD broadcasting, meaning that if laptop and tuner are taken abroad you may well be able to tune into terrestrial HD services. A UK 'exclusive' catered for by the package is MHEG-5 – 'red button' digital teletext to you and I. Picture and sound quality are both top-notch, because the video and audio are 'snatched' directly from the off-air transport stream.
- You can also 'timeshift' live TV, your computer's HDD being used as a temporary buffer. Timed recordings can be scheduled via the basic EPG.

- The AVerTV Volar HD is compatible with third-party applications and so you're not stuck with what AVer gives you. The device is also compatible with the TV functionality of Windows Media Center Edition.

## Lows

- The supplied TV aerial is, to all intents and purposes, useless. Unless, of course, you can see the transmitter mast out of your window. With a properly-installed external aerial, though, AVerTV Volar HD proved its mettle.
- Even if two channels are in the same multiplex, you cannot record one while viewing the other.

## HCC VERDICT

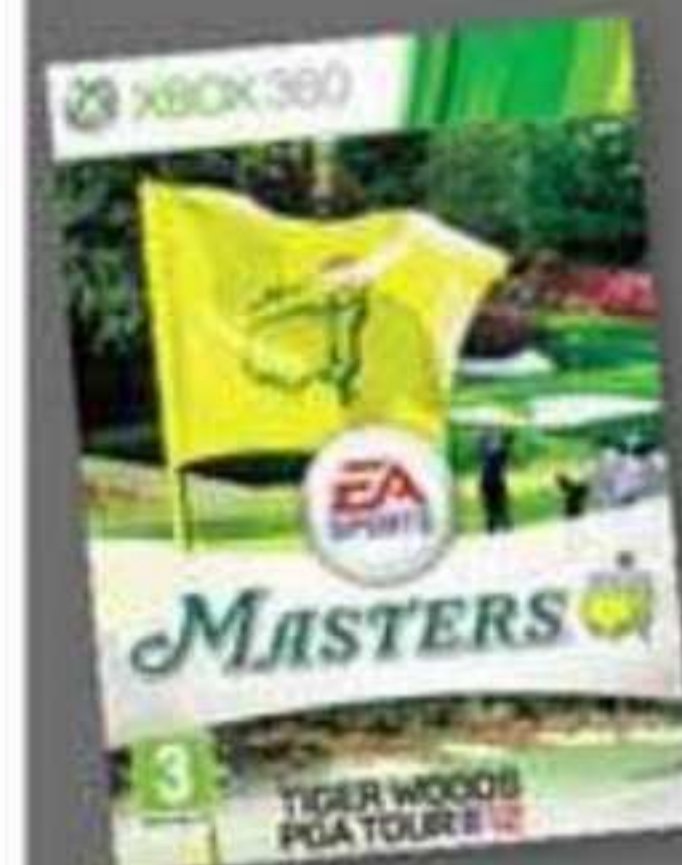
AVerTV Volar HD  
£30 Approx

Overall: 1 2 3 4 5



## In Brief

Tiger Woods  
PGA Tour 12:  
The Masters  
EA Sports,  
£50 Approx



The world's greatest golf sim is back and looks absolutely breathtaking on a big home cinema screen, thanks to its enhanced graphics engine. TW12 also plays brilliantly and finally gives wannabe Tigers the chance to compete at the legendary Augusta Golf Club. Addictive console fun

1 2 3 4 5



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72 AIRTIES AIR 4420-TV → FROM £50 Approx → [www.airties.com](http://www.airties.com)

# Whizzing media about the house

Wi-fi networking and a USB media server impresses **Martin Pipe**

If all you need is the ability to stream multimedia files to various players around the home, then this device is for you. The 4420 has a server that's

**Streamer:**  
Multimedia in every room



fully uPnP compliant, and boasts a feature you won't find on the average NAS – the 4420's integrated wi-fi capabilities enable you to set up an additional access point, or bridge any networking 'gaps' in larger homes.

## Highs

- To extend the physical 'reach' of a network to accommodate, for example, an internet-enabled bedroom TV, you can buy a pair of 4420s.
- Supports the established 2.4GHz and newer 5GHz bands. High-speed 'N' is supported for claimed data transfer rates of up to 300Mbps.
- The uPnP server works very well indeed. I plugged a large FAT32-formatted pen drive, containing a variety of categorised multimedia content, into the side-mounted USB port. All of the content – music, video and photos – was accessible to my array of multimedia players.

## Lows

- The supplied management software displays a diagrammatic representation of your network, including any 4420s. If one of these has a USB storage device attached, then you can open it up on your PC desktop just like a local hard drive. But transfers are ponderously slow. AirTies says it's making a firmware update available.
- Network Assistant, as this management system is known, is currently Windows-only, and the configuration interface is occasionally unresponsive. In addition, it's picky about Windows workgroup names.

## HCC VERDICT

AirTies Air 4420-TV  
£50 (single), £90 (twin) Approx

Overall: 1 2 3 4 5

TEUFEL REARSTATION 4 → £270 Approx → [www.teufelaudio.co.uk](http://www.teufelaudio.co.uk)

# No-strings audio from a box

**Martin Pipe** tries out a nifty package aimed at cable-phobes

This solid pair of black boxes, from speaker manufacturer Teufel, will let you send two channels of audio wirelessly. This is a handy concept if you can't run wires to rear speakers, or simply want hassle-free, multi-room music. The cigarette box-sized transmitter sports a couple of phono sockets, which are fed with the relevant outputs of your AVR or audio system. Rather larger is the receiver, the internal amp of which can drive speakers directly. A nifty circuit automatically switches the RearStation 4 into standby in the absence of audio. Additional receivers can be bought for £180 and any number can be partnered with a single transmitter 'within range'.

## Highs

- A range of 20m should cater for most applications. Up

to three RearStation 4s can be used and controlled independently via the supplied handset, making the system ideal for convenient audio distribution. Many AVRs with 'zoning' capabilities can drive the RearStation transmitter directly using the appropriate phono outputs.

- The 2 x 30W amplifier built into the receiver unit is good news for anyone whose AVRs only offer line-level outputs for certain surround channels, because they lack the full complement of internal amplifiers.
- The incoming audio is converted into digital for transmission, ensuring excellent channel

separation and freedom from the hiss and crackles associated with analogue FM 'senders'.

## Lows

- Wireless, the communication between transmitter and receiver may be – but you'll still need to locate mains sockets for the transmitter and receiver.
- While the output power is perfectly adequate for second room use, it's limited compared to what most AVRs offer and the resulting imbalance will yield an unpleasant 'grittiness' from the RearStationed pair of channels – certainly when your home cinema is driven hard.



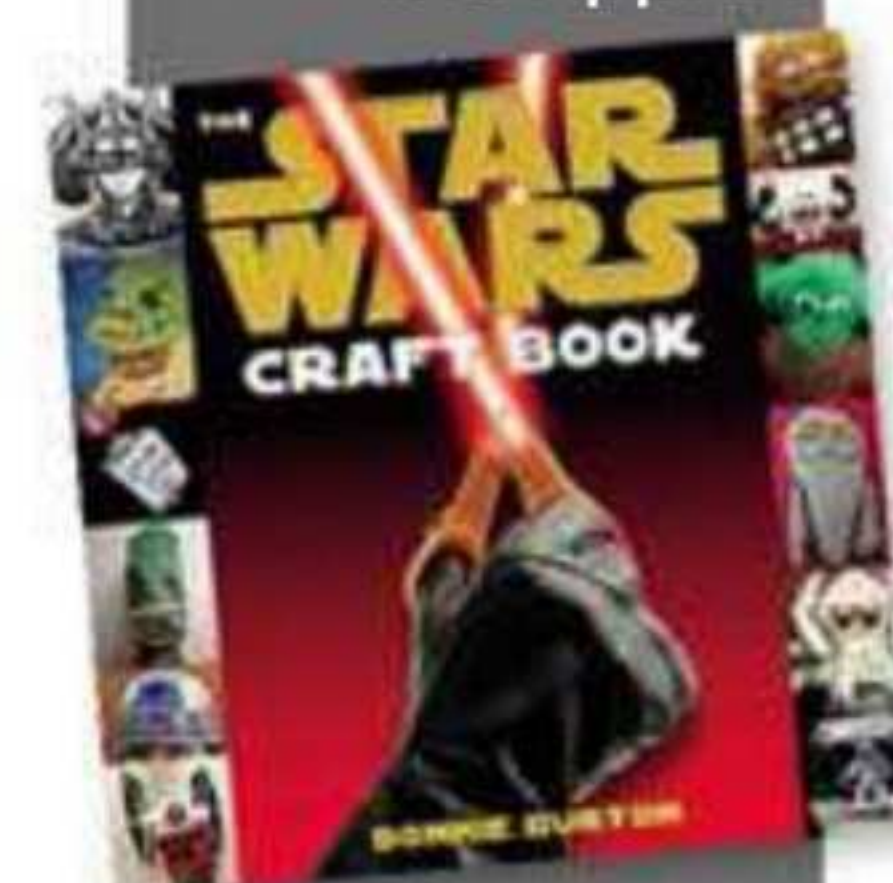
## HCC VERDICT

Teufel RearStation 4,  
£270 Approx

Overall: 1 2 3 4 5

## In Brief

The Star Wars  
Craft Book  
Titan Books,  
£15 Approx



This is certainly one of the oddest Star Wars tie-ins we've ever seen – 150 step-by-step guides to crafting your very own Star Wars themed memorabilia, including an R2-D2 crochet beanie, a wookiee pumpkin and an AT-AT herb garden. Are you geeky enough to handle it?

1 2 3 4 5



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## NEW

- Sony launches the BDP-S780 and BDP-S580 Blu-ray disc players. These 2011 models deliver Full HD 3D images, have built-in wi-fi and include picture processing designed to improve low-quality web content. The S780 is also Skype capable and includes 2D to 3D upconversion processing.
- Monitor Audio introduces the Gold GX speaker range comprising both standmount and floorstanding models along with centre and rear effect speakers and an active subwoofer. GX uses technology from Monitor Audio's flagship Platinum series.
- Denon has added the DBP-2012UD to its range of Blu-ray players. This universal player will play SACD and DVD-Audio discs, as well as 3D Blu-ray discs, and is DLNA-certified for accessing content over your home network.



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### JVC DLA-X3 D-ILA 3D PROJECTOR

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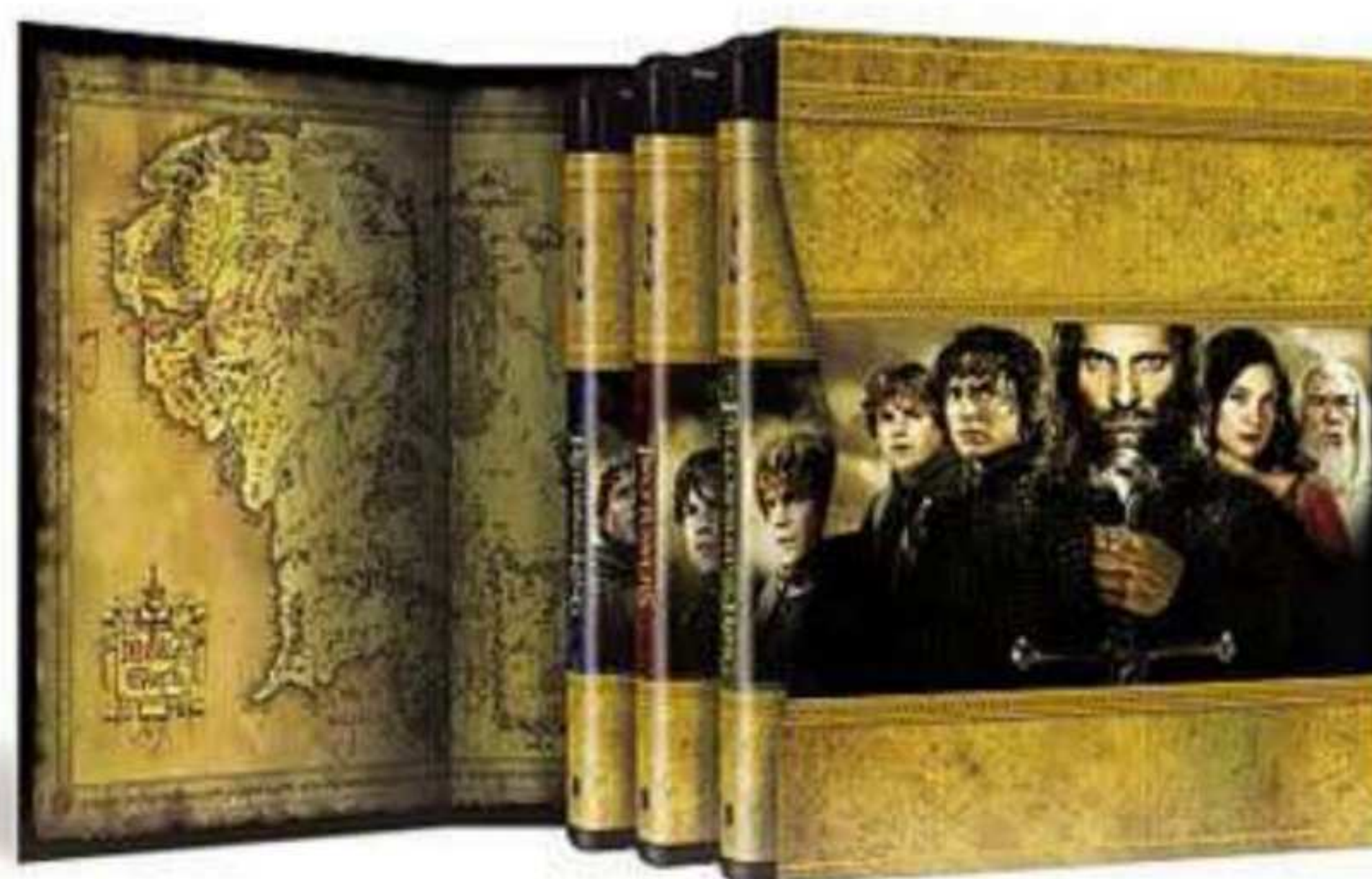
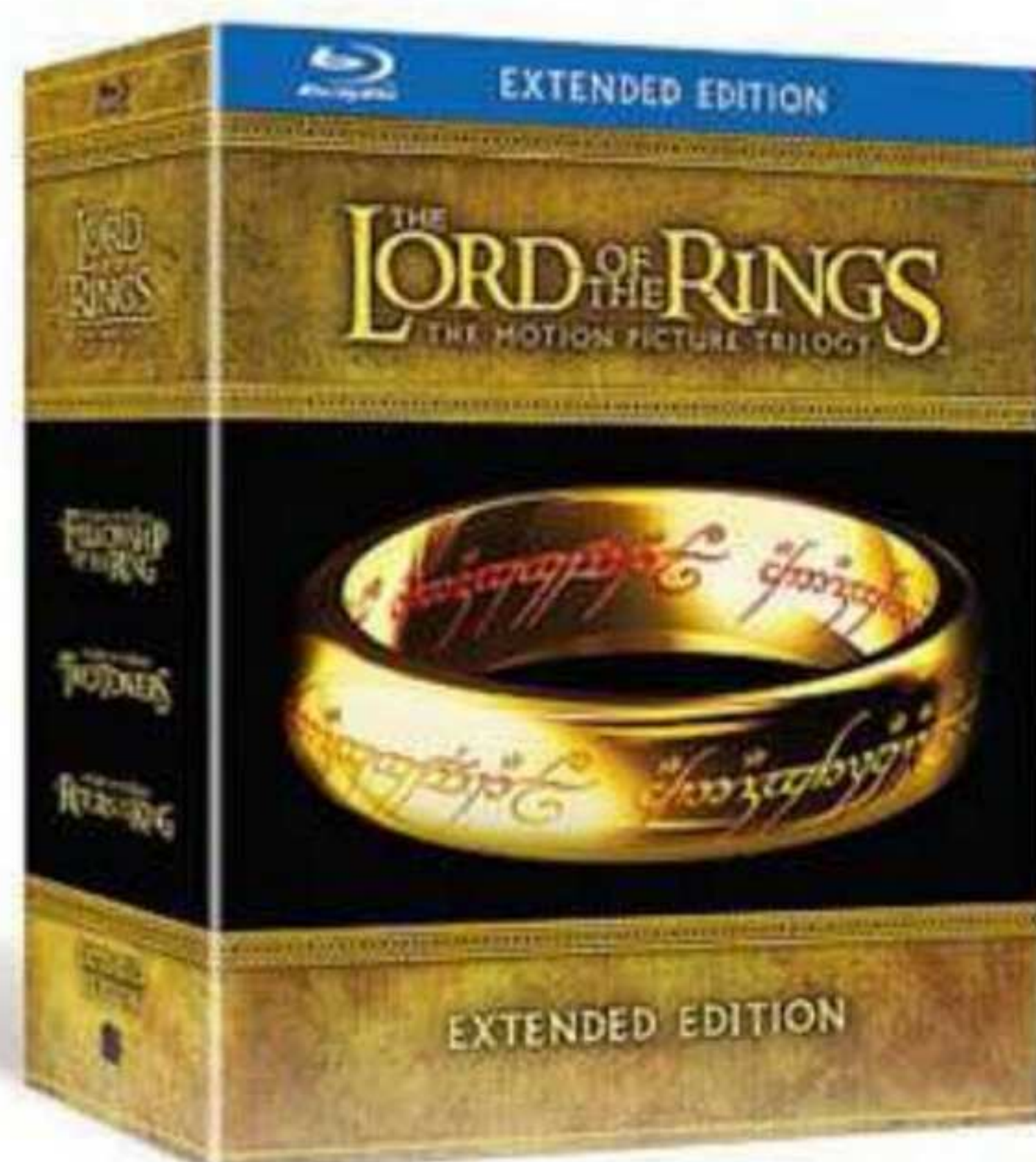
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## The Lord of the Rings Trilogy on Blu-ray



To celebrate the release of *The Lord of the Rings – The Motion Picture Trilogy: Extended Edition* on Blu-ray, our friends at Entertainment in Video have donated two copies of this massive 15-disc box set to give away to HCC readers.

Each film in the blockbusting trilogy is housed across two Blu-ray discs, guaranteeing optimum quality for the HD visuals and DTS-HD Master Audio 6.1 soundtracks. The remaining nine DVDs are packed full of extensive bonus features that no Middle Earth maniac can do without, including exclusive behind-the-scenes documentaries from filmmaker Costa Botes.

Answer the following question correctly to be in with a chance of winning...

**Who played Frodo in Peter Jackson's *Lord of the Rings* trilogy?**

**A:** Tobey Maguire **B:** Elijah Wood **C:** Sean Astin

Text **HCCLOTR**, space and your answer **A, B or C**, followed by your name and address to 87474. Texts cost 50p plus your standard network tariff. The closing date for entries is midnight on 30 June 2011. Only UK entries will be accepted. Enter for free at [www.futurecomps.co.uk/hccclotr](http://www.futurecomps.co.uk/hccclotr)

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## Also up for grabs: new Blu-ray releases!

### The Rite



New supernatural thriller *The Rite*, starring screen legend Sir Anthony Hopkins, is coming to DVD and Triple Play Blu-ray on 20 June, courtesy of Warner Home Video Pictures, priced £20 and £25 respectively. We've teamed up with the studio to offer five lucky readers the chance to win a copy of the Blu-ray. All you have to do to enter is to visit the website at [www.futurecomps.co.uk/hccrite](http://www.futurecomps.co.uk/hccrite), and answer the question before June 30:

**Anthony Hopkins played which serial killer in *The Silence of the Lambs*?**

**A:** Hannibal Lecter **B:** Ted Bundy  
**C:** Jack the Ripper

### The Fighter



Thanks to Momentum Pictures, we've got copies of the Academy Award-winning boxing drama *The Fighter* on Blu-ray to give away to five lucky readers. Available to buy on

DVD and Blu-ray on June 20, the movie tells the true story of pugilist 'Irish' Mickey Ward (Mark Wahlberg) and his pursuit of a world title. All you have to do to enter is to visit the website at [www.futurecomps.co.uk/hccfighter](http://www.futurecomps.co.uk/hccfighter), and answer the question before June 30:

**Mark Wahlberg starred in which science-fiction remake?**

**A:** The Blob **B:** Planet of the Apes  
**C:** War of the Worlds

### Classic War movies!



Love war movies? Then you can't miss the chance to snaffle both *Cross of Iron* and *The Cruel Sea* (each

digitally restored) on Blu-ray courtesy of Optimum Home Entertainment.

We have three pairs of these titles to give away. All you have to do to enter is to visit the website at [www.futurecomps.co.uk/hcciron](http://www.futurecomps.co.uk/hcciron), and answer the question before June 30:

**Cross of Iron director Peckinpah also made which classic Western?**

**A:** The Wild Bunch **B:** The Outlaw Josey Wales **C:** Paint Your Wagon

The small print: By taking part in a Competition, you agree to be bound by the Competition Rules which are summarised below but can be viewed in full at [www.futureTCS.com](http://www.futureTCS.com). All correct answers are placed in a draw and the winners chosen at random. Proof of posting (if relevant) shall not be deemed proof of delivery. Entries must be submitted by an individual (not via any agency or similar) and, unless otherwise stated, are limited to one per household. The Company reserves the right in its sole discretion to substitute any prize with cash or a prize of comparable value. Unless otherwise stated, the Competition is open to all GB residents of 18 years and over, except employees of Future Publishing and any party involved in the competition or their households. By entering a Competition you give permission to use your name, likeness and personal information in connection with the Competition and for promotional purposes. All entries will become the property of the Company upon receipt and will not be returned. You warrant that the Competition entry is entirely your own work and not copied or adapted from any other source. If you are a winner, you may have to provide additional information. Details of winners will be available on request within three months of the closing date. Receipt of any prize is conditional upon you complying with (amongst other things) the Competition Rules. You acknowledge and agree that neither the Company nor any associated third parties shall have any liability to you in connection with your use and/or possession of your prize. Promoted by Future Publishing, 2 Balcombe Street, London NW1 6NW





**Stylish storage:** Alphason Designs' YATAI offers push-to-open media drawers

## WIN! One of two designer TV stands from Alphason Designs

**A**lphason Designs is well known for the stylishness of its TV stands – and these two new designs, created for the new Sony Bravia Monolithic TVs although equally at home with any other flatscreens on the market, are no exception. And we have one of each to give away!

Designed and made in Britain by Alphason's talented team, these premium stands look incredibly stylish and will grace any living room.

YATAI (pictured left) is an elegant and modern TV stand for those with passion for design, style and aesthetics. Its low-to-ground profile make it suitable for large screen TVs. The stunning high gloss black or white finish is achieved by choosing the best quality materials and processes.

YATAI features two push-to-open media drawers with aluminium fronts which fit seamlessly at six degrees into the side modules. Available in two sizes for TVs up to 46 and 55in.

TENSAI (below) features 6 degree tilting sides to give the optimum viewing angle.

The brushed steel frames and supports match perfectly with today's latest AV equipment and are contrasted by the piano black glass. An adjustable shelf gives you the option to perfectly display an array of equipment, aligned perfectly with your TV.

An innovative cable management system with adhesive pads support almost any power block and has the ability to wrap cables around the shaped edges, ensuring the sleek look is not ruined by unsightly cables. Available in three sizes for TVs of up to 40, 46 and 55 in.

Check out [www.alphasondesigns.com](http://www.alphasondesigns.com) for more info.

To win one of these stands, just answer the following simple question correctly:

**Alpha is the first letter of which alphabet?**

**A:** Greek **B:** Chinese **C:** Martian

There are two ways to enter:

**EITHER** text **HCCALPHA2**, space, and your answer **A**, **B**, or **C**, followed by your name and address, to **87474**. Texts cost 50p plus your standard network tariff. Closing date for entries is midnight on June 30 2011.

**OR** Enter free by visiting the website at [www.futurecomps.co.uk/hccalpha2](http://www.futurecomps.co.uk/hccalpha2)

*Entries from the UK only. The two winners will be selected at random from the correct entrants. The first entrant drawn will win a YATAI, the second will win a TENSAI. We will contact the winners to find out their preferred size.*



**alphason**



78 PCTV SYSTEMS BROADWAY 2T → TIVOLI AUDIO MODEL 10+ → CLIPS

# Finishing touches

**Adrian Justins** trawls the shelves for those must-have home cinema extras

## TIVOLI AUDIO MODEL 10+

Approx £219

Future-proofed with DAB+, Tivoli Audio's latest table radio is the company's smallest yet but doesn't skimp on features. Joining DAB and FM is an auxiliary input that lets users connect a CD player, iPhone, iPod or other MP3 player. And adding the optional matching Model 10+ stereo speaker turns the standalone unit into a full stereo system. An 8cm full-range speaker driver combines with an on-board EQ system that can individually adjust bass, treble, loudness and balance. Functions can either be accessed by a single, top-mounted rotary dial, or via the supplied remote control.

[www.tivoli-audio.co.uk](http://www.tivoli-audio.co.uk)

### HCC VERDICT

*A well-connected DAB+ radio ideal for the bedroom*

## PCTV SYSTEMS BROADWAY 2T

Approx £230

PCTV Systems is aiming a broadside at Slingbox with its Broadway 2T, which lets itinerants redirect their home TV (thanks to twin DVB-T tuners) and video recordings to an iPhone, iPad, netbook, notebook or Mac computer anywhere in the world. On the road, content is accessed using a web browser over a 3G or broadband connection, with the option to remotely schedule recordings or play pre-recorded content from a PVR. Integrated 802.11n WLAN provides wireless streaming from the 2T unit to a mobile device within a domestic environment. The cute-looking box comes supplied with a wall-mounting kit, too.

<http://www.pctvsystems.com>

### HCC VERDICT

*A travel tonic for telly addicts*







## OMNIMOUNT OMF

Approx £40

OmniMount has unveiled a new tilt version of its flatscreen OMF wall mount. The ultra-low profile OMF is suitable for screens from 13in up to 46in, weighing up to 36kg and now offers a 5° tilt to help reduce unwanted screen glare. Simplicity and discretion are the name of the game with OmniMount's idiot-proof installation process: simply attach the panel spacers to the back of the TV using a screwdriver, mount the tiny wall brackets with the template provided and hang the flat panel in its place. The four separate wall brackets are claimed to work with all hole patterns on flatscreen TVs, providing universal compatibility; and two comprehensive installation templates are provided for simple and accurate mounting. Once mounted, the product 'disappears' behind the TV, making it ideal for a sleekly-styled media room.

[www.omnimount.com](http://www.omnimount.com)

### HCC VERDICT

*There's no excuse not to wall-mount now*



## BELKIN IPAD STANDS

Approx £25

Some people think that Apple's own stand for the iPad 2 is the coolest thing about the tablet, but Belkin's razor-thin FlipBlade Adjust comes close. A simple adjustment makes it easy to switch between portrait and landscape modes, and the stand also tilts for the best ergonomic viewing position. Complementing the Adjust are five Folio stands including the £30 Access (pictured) which offers protective screen cover and integrated storage pockets..

[www.belkin.com](http://www.belkin.com)

### HCC VERDICT

*An iPad without a stand is like a cup of tea without a cup*

## MEELECTRONICS HT21

Approx £20

New kid on the headphone block MEElectronics has unleashed a range including the on-ear closed-back HT21s (£20 approx, pictured), which feature adjustable swivel cups and are designed to 'hug your head'. Comfort is improved by the 'no-split' single-sided cable. Another new product is the SP51P in-ear headphone that allows users to adjust sound to their preference by changing the rear tuning ports. Options comprise pounding bass, a neutral sound and a little enhanced bass. The SP51P features an in-line mic for use with smartphones where switching from music or visual entertainment to phone call use is required.

[www.advancedmp3players.co.uk](http://www.advancedmp3players.co.uk)

### HCC VERDICT

*Comfy, affordable cans*



## Clips...

Small items that will make a big difference to your system

### Edifier Prime USB speakers, £45



Edifier has unveiled a USB Hub speaker system with four-way USB audio streaming and stereo phono audio inputs. With 52mm full-range magnetically shielded speaker drivers, the white-finished satellites also have handy top-mounted electronic volume controls.

[www.amazon.co.uk](http://www.amazon.co.uk)

### Arcam rWave, £80



Arcam's best-selling rCube iPod dock gets an upgraded to the

wireless club with the rWave dongle. Using KLEER wireless technology for high-fidelity sound, the rWave connects your PC or Mac with an rCube without the need for a normal wireless network. Range is a claimed 50m.

[www.arcam.co.uk](http://www.arcam.co.uk)

### Zapperator from £85



Designed to absorb and dissipate RF and EMI from spikes on, or induced by,

the AC supply (often caused by devices such as mobile phones and wireless networks), the Mains Zapperator plugs straight into a standard wall socket near your AV system to create a 'quiet' zone at, or near, the source of the noise. The Mini Zap meanwhile plugs directly into a DIN or XLR plug on an AVR.

[www.russandrews.com](http://www.russandrews.com)

### Kube Player, £40



This 23mm cube-shaped MP3 player claims to be the world's smallest,

and can fit around 500 tracks on its supplied 2GB Micro SD card (and can be upgraded to 32GB, too). Available to buy from Amazon.

[www.thekubeplayer.co.uk](http://www.thekubeplayer.co.uk)



# A touch of genius



In control with Control4's app



Tablets and apps will become an essential part of your home cinema system, says **Cliff Joseph**

The tremendous success of the smartphone concept, which adds PC-like functions to a pocket device, is one of the greatest recent advances in consumer technology. By downloading apps to devices such as the Apple iPhone or the Samsung Galaxy, you can add customised control functions to an affordable and convenient device. Yet it's the more recent tablet devices, which are basically touchscreen PCs, that have even more potential for home cinema owners in terms of entertainment and control applications.

The key choice when buying a smartphone or tablet is whether to go for Apple's iOS platform, or the widely used Android system.

The current reigning champ is the Apple iPad – and, in particular, the new iPad 2 – which runs Apple's iOS software. All the other rival tablet devices, from Samsung's sleek and pricey Galaxy Tab down to the cheap and cheerful HomeSurf from Binatone, use Google's Android software or a version of Windows. There may be differences in terms of the physical hardware design of

these devices – the iPad, for instance, is only available with a 9.7in screen, while many of its rivals opt for more portable 7in screens. And if you want to connect your tablet to an HDTV, you'll obviously need a model that has an HDMI connector, or at least the option to buy some sort of HDMI adaptor cable (which is Apple's approach with the iPad).

However, it's the underlying software controlling these devices that really sets them apart. Apple has been developing software for decades, so its iOS is a lot slicker and more polished than Android, but the latter is very much following the Apple template, so the basic approach is essentially the same. Pick up an iPad or an Android tablet and you'll see a similar screen full of apps – small programs that perform specific tasks, such as a web browser, email program, or music player. From a home entertainment point of view it's these apps that we're really interested in.

### Apps In Store

All tablet devices come with a basic set of pre-installed apps, but the

enormous success of the iPad and iPhone has led to the creation of thousands of others, all of which can be downloaded from Apple's online App Store. **In addition to the endless Angry Birds, Brain-Eating Zombies and farting-noise apps, there's a growing category that allow an iPhone or iPad to be used as part of your home entertainment system.**

You can rent HD films and TV programmes from Apple's iTunes Store, or watch 'catch-up TV' apps from broadcasters such as Sky and the BBC. There are apps from manufacturers such as Samsung and Philips, which are designed for use with their own TV and music systems, as well as 'universal' remote control apps that can control a wide range of devices from various manufacturers. There are also specialist apps for tasks such as testing and tuning speakers.

Google has set up its own online Android Market for Android apps, but it can't yet match the variety of apps that are available for the iPhone and

### Touchscreen temptations:

Your next home cinema remote control could look like this





## 82 TAKING CONTROL

iPad. Another problem here is the fact that some Android tablets don't even have direct access to the Android Market, which means that locating, downloading and installing additional apps from the internet becomes a bit of a chore.

The obvious place for the Apple-owning home cinema fan to start is with Apple's own iTunes app, which comes pre-installed on every iPad, iPhone and iPod Touch. This carries a huge range of music, films and TV programmes that you can buy and rent, including an increasing selection of recent box office hits in 720p high-def.

Unfortunately, iTunes is expensive – recent releases such as *Skyline* cost £13.99 to buy in HD, and £4.49 to rent – and it doesn't have much competition when it comes to film downloads, because the iPhone and iPad don't work with the Flash video format used by many rival streaming video services.

One notable exception here is the recently released PictureBox, an iPad-only app that provides a monthly selection of family-oriented films for just a fiver a month ([www.picturebox.tv](http://www.picturebox.tv)). It's good value for money, although the films are standard-definition only. As a LOVEFiLM subscriber I was disappointed to see that the app merely allows you to watch trailers – something that I prefer to do with the Flixster or IMDb apps on the iPad.

There's more variety when it comes to TV programmes. Both Sky and the BBC have recently launched new apps designed specifically for the larger screen of the iPad. The BBC iPlayer app is a particular favourite, though it's a shame that you can't download HD versions of some programs as you can do when watching on a Mac or PC.

### Take control

These on-demand content apps are certainly useful to have if you're media-hungry, but perhaps more interesting is the way that tablets (and smartphones) are rapidly making your collection of remote controls look pointless.

The remote-control app category has really taken off. Several manufacturers including Samsung, Philips, Denon, Pioneer, Yamaha Naim, Sonos, Sony and Panasonic have released free apps for controlling their own hardware. The iPad and iPhone don't have IR transmitters, but many recent TVs and speaker systems now have wi-fi networking built into them, enabling users to control them via a wireless home network. There's also a Sky+ app that allows you to schedule recordings when you're out and about with your iPhone.

There are also a number of universal remote controls that can control devices from multiple manufacturers simultaneously. These generally include a controller app along with a small IR transmitter that acts as a relay between the iPad/iPhone and your TV and other devices. The cheapest of these is the RedEye Mini ([www.veda.co.uk](http://www.veda.co.uk)), which costs just £50 and plugs into



**Smaller choice:** If a tablet doesn't appeal, smartphones like the iPhone can still be used to control your system

the audio socket on the iPad or iPhone. There's also the more expensive RedEye Dock, which costs about £200, and allows you to control your devices from any room in your home via your home network. The apps are a little fiddly to set up at first, but work well once you've entered all the details of your TV and other devices.

Sitting right between the two RedEyes at £100 is Gear4's Unity Remote ([www.gear4.com](http://www.gear4.com)). The Unity app makes good use of the touch-screen controls

of the iPhone and iPad, allowing you to change channels or adjust volume with a quick flick of your finger. The latest arrival in this category is the Beacon from Griffin Technology ([www.griffintechology.com](http://www.griffintechology.com)). We haven't seen this one yet, but Griffin says that it will work with Android devices as well as the iPhone and iPad.

This sort of control app could equally well be applied to systems such as lighting, screen and curtain automation, air conditioning and heating, security and communications – the type of functions currently handled by expensive proprietary systems such as Crestron controllers. We expect these applications to become universal over the next couple of years; you'll be able to control all your household functions with an affordable smart device and inexpensive apps.

Finally, there's a selection of more specialized apps that can be used to monitor and tune speaker systems. Decibel meters, such as the aptly named Decibel, are very popular – even making an appearance on *Top Gear* recently. There are also a number of Real Time Analysis (RTA) apps, which can be used to analyse sound output and fine-tune speaker systems. One interesting app that we recently came across is HD Sleuth, which is designed to track down audio and video problems when setting up HDMI kit. This particular app is available for Android devices ([market.android.com](http://market.android.com)) as well as the iPhone and iPad.

**IR control:** Gear4's Unity Remote combines an app and external transmitter





# Take a tablet...



## Apple sold more than 15 million

iPads in just nine months last year, and the round-the-block queues for the second-gen model suggest that Apple has another winner on its hands.

The secret of the iPad's success lies in its sheer versatility, which allows it to double up as a web browser and email device, e-book reader, games console and portable media player, and the number and variety of apps available. The current version of the iPad, (iPad2) can be yours from £400 – turn the page for our verdict.

Away from the Apple/iOS universe there are a plethora of Android tablets to choose from, and you may find something here that suits your needs/budget more. One Android tablet to rival the features and versatility of the iPad is Samsung's Galaxy Tab. This has only a 7in screen, compared to the 9.7in screen of the iPad, but it outgunned the first version of the iPad with features such as twin cameras and HDMI connectivity, and a 10in model is imminent.

ViewSonic has a range of tablets in 4in, 7in and 10in variants. The ViewPad 7 is an Android 2.2 Tablet with integrated phone capabilities, Bluetooth, wireless, GPS and MP3/video playback.

The Asus Eee Pad Transformer is clearly aimed



at the entertainment market, featuring a 10in display, 1.0GHz dual-core CPU, 1080p video playback, Android 3.0 with Adobe Flash support, HDMI v.1.3 output and 3D stereo sound with SRS, it comes with a detachable QWERTY keyboard (pictured left), so it's half-tablet, half-laptop.

## Penny pinching

The Galaxy Tab and Asus Eee Pad Transformer are just as expensive as the iPad, with prices currently starting at around the £400 mark, but there are more modestly priced Android tablets available too. Creative Labs' Ziio or the Archos Internet Tablet are essentially portable music and video players with a bit of web browsing and e-book reading thrown in for good measure, but they work perfectly



well and come in at around £200 for a model with a 7in screen.

Binatone's HomeSurf starts as low as £100 for a 7in model, but these cheaper tablets often cut corners with less responsive touch-screen displays and a limited range of games and other apps.

One interesting development is RIM's recent announcement of its BlackBerry PlayBook, which will break new ground by using the new BlackBerry Tablet software rather than Android. However, RIM has pointed out that the PlayBook will also be able to play existing Android apps – emphasizing once more that it's the apps that really make or break any new tablet device.

## iPad rivals:

Samsung's Galaxy Tab (above) and RIM's BlackBerry PlayBook (top left)

## Economy drive:

Tablets like Binatone's HomeSurf (left) can cost as little as £100



# Second-gen stunner

**Cliff Joseph** sees home cinema potential in the new HD-capable iPad



If it ain't broke, don't fix it. Some people seem disappointed that the iPad 2 isn't so drastically different from the original model, but it's some of the smaller changes in the iPad 2 that will probably ensure its continued runaway success.

The fact that Apple has managed to break the £400 barrier for the entry-level model with 16GB storage and wi-fi networking – down just £30 from £430 – may sway quite a few people who had previously resisted the iPad's sleek charms. However, Apple does start to stack up its prices a bit with the 32GB and 64GB models, which cost £480 and £560. It also costs a hefty £100 extra to add 3G mobile internet access to any of those models.

And speaking of sleek, this new model is also about 30 per cent thinner, and now measures just 8.8mm thick. This makes it feel a lot more comfortable when you're holding it in one hand and reading e-books or browsing the web. It's a little lighter too – down about 80g to 600g – but still feels heavier than you might expect from the new slimline design. However, the weight is largely due to the battery that fills most of the inside of the unit. Reducing the size of the battery would have affected the iPad's impressive 10-hour battery life, so Apple's probably right not to compromise here.

It has also managed to fit two new cameras into the unit, addressing one of the most obvious weaknesses of the original model. Admittedly, neither the 720p rear camera, nor the front-facing 640x480 camera

**Black box:**  
also available  
in white

provides particularly outstanding image quality, but then it's never going to be used as a quick point-and-shoot camera. However, Apple's FaceTime video-conferencing software will be a lot of fun for families and friends who want to keep in touch long-distance.

One of the most important new features is Apple's A5 chip, which is significantly faster and more powerful than the A4 chip of the original iPad. You may not notice the extra speed straight away, but the power of that chip will ensure that the iPad continues to attract top-notch games, as well as powerful new apps such as Apple's own iMovie video editor and GarageBand music software.

## Digital AV app

There's one final new feature that is of particular interest – although you'll need to cough up an extra £35 for Apple's Digital AV adaptor in order to use it. It plugs into the dock connector on the base of the iPad and provides HDMI output for an HDTV. It's really nice to be able to download films and TV programmes onto the iPad for portable use and then just plug it into a larger screen when you want to. However, individual apps on the iPad do need to have HD output capabilities programmed into them, or else they'll just 'mirror' the video image at the iPad's standard resolution of 1,024 x 768. Of course, that raises the question of why the iPad screen still has a 4:3 aspect ratio – but that's probably something Apple wants to save for next year's iPad 3.

## → Specifications

**Dimensions:** 241(h) x 186(w) x 9(d)mm  
**Weight:** 600g  
**Screen size:** 10ins  
**Screen resolution:** 1,024x768  
**Storage:** 16GB; 32GB; 64GB  
**Processor:** 1GHz, dual-core Apple A5  
**File format support:** MP3, AAC, WAV, H.264, MP4  
**Connectivity:** Dock connector; 802.11n wi-fi; optional 3G  
**Audio:** Headphone minijack; microphone  
**Camera:** Front-facing 640x480; rear 720p  
**Battery life:** 10hrs

## AV/CV

**Product:**  
Tablet  
computing  
device with  
10in screen

**Positioning:**  
Apple's latest  
model

**Peers:**  
Samsung's  
Galaxy Tab;  
Motorola Xoom



## HCC VERDICT

Apple iPad 2  
£400 Approx

**Highs:** Slimmer and faster than the original; twin cameras; new HDMI output

**Lows:** HDMI output requires £35 adaptor; still no Flash support

**Performance:** 1 2 3 4 5

**Design:** 1 2 3 4 5

**Features:** 1 2 3 4 5

**Overall:** 1 2 3 4 5



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# PLAYBACK

→ **Software highlights** **THE FIGHTER** A Blu-ray that punches above its weight **THE MECHANIC** Jason Statham does what he does best **HARRY POTTER & THE DEATHLY HALLOWS: PART 1** More hi-def wizard shenanigans **STANLEY KUBRICK** Seven classic movies in one box set **I SAW THE DEVIL** Korean thriller could be one of 2011's best **AND MUCH MORE!**

## Hell on earth!

The Walking Dead → HBO  
All-region BD

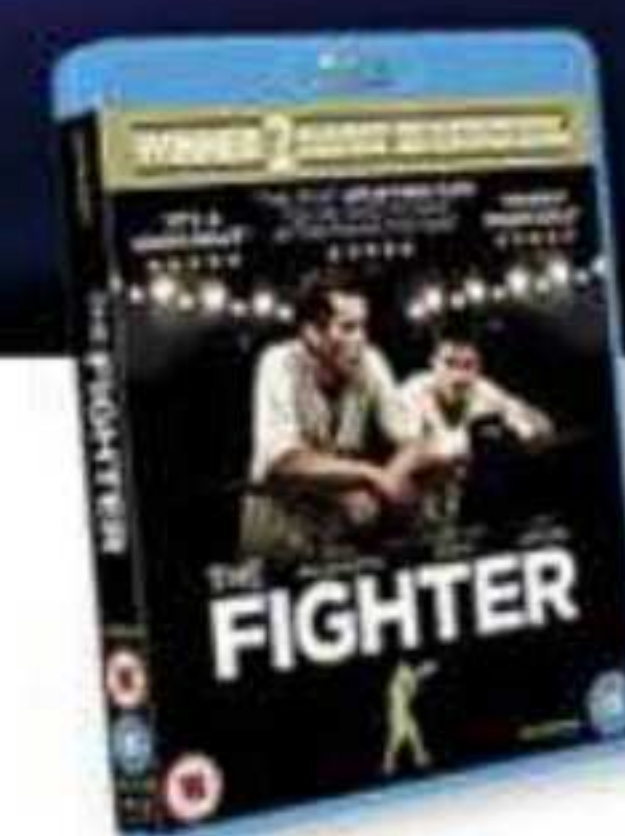
Let's get this flesh-eating party started! The first season of smash TV show *The Walking Dead* is out on Blu-ray— read our verdict on page 92

### HCC Ratings key

Dead of Night	1 2 3 4 5
The Dead	1 2 3 4 5
Dead End	1 2 3 4 5
Shaun of the Dead	1 2 3 4 5
Dead Again	1 2 3 4 5



The Wii Fit  
had certainly  
changed his  
life forever



# Boxing hero weighs in

Soundtrack plants an upper cut in all the right places, as the audio gloves go on



## HCC VERDICT

The Fighter → Momentum  
Pictures → Region B BD  
£25 Approx

**We say:** With its impressive  
Blu-ray release, this modern  
classic lands a first round K.O.

Picture: 1 2 3 4 5

Sound: 1 2 3 4 5

Extras: 1 2 3 4 5

Movie: 1 2 3 4 5

Overall: 1 2 3 4 5

**The Fighter** is the latest in a long line of films that shows just how well cinema and boxing go together by combining the industry's favourite themes: human drama, triumph of the underdog and people being hit in the head repeatedly. Consequently, Hollywood's history is lined with hymns to professional pugilists (either fictitious or real) in the form of classics such as *The Champ*, *Gentleman Jim*, *Rocky* and *Raging Bull*.

Thanks to powerhouse performances from Mark Wahlberg, Christian Bale, Amy Adams and Melissa Leo, this true story of the life of boxer Micky Ward is up there with the very best of them. A remarkable movie that's expertly brought to the screen by people who care deeply about their craft.

**Chris Jenkins:** With the exception of a few pre-menu trailers for other Momentum titles, this appears to be an exact copy of Paramount's US Blu-ray, from the menu design right down to the AVC 2.40:1 1080p encode. And a good job, too, as this is a fantastic hi-def transfer, full of crisp delineation, intricate detailing and natural colours. It also boasts an incredibly natural and filmic look, thanks to the fine layer of grain present throughout most of the footage. Admittedly, the two big fight scenes don't look quite as good (that's because they've been tweaked to

accurately resemble broadcast footage) and there's some very minor banding elsewhere. But on the whole, this disc delivers a knockout when it comes to picture quality.

**Mark Craven:** For a sporting drama, *The Fighter* makes surprisingly strong use of its DTS-HD MA 5.1 soundtrack. Naturally, the key to the entire mix is the excellent dialogue reproduction. But there's also plenty of use of the surrounds for ambient effect and to make the various songs used in the score seem a lot more energetic and spacious. However, as good as the rest of the mix is, it's all a preamble to Chapter 15's climactic fight, which is accompanied by audio that's bursting with controlled aggression thanks to the cheers of the crowds and the booming bass of the music playing in the arena. It's as good as anything you'll hear in a blockbuster action epic.

**Anton van Beek:** Director David O Russell provides an excellent solo commentary, in which he provide endless details about the true events *The Fighter* draws upon, the challenges encountered during the shoot, technical information and more. The 30-min *The Warrior's Code: Filming the Fighter* offers an excellent snapshot of the production. Also included are 16 deleted scenes, the trailer and a very short look at the Ward family's boxing history.





## Harry Potter and the Deathly Hallows: Pt 1

Warner Home video → All-region BD BD £29 Approx



The penultimate Potter outing is the darkest instalment yet, thematically and visually. The AVC

2.40:1 1080p encode works hard with the film's drab and dingy visuals, and ultimately lacks the clarity you'd expect from a blockbuster today. Much better is the DTS-HD MA 5.1 mix, which balances dialogue, bombast and subtle atmospherics. Extras include a *Maximum Movie Mode*, six *Focus Point* and five behind-the-scenes featurettes, two promos, a BD-Live link and a DVD and Digital Copy of the film. **AvB**



## Gulliver's Travels 3D

20th Century Fox/MGM → Region B/C BD → £30 Approx



Forget Swift's original satire, this 21st century update swaps social commentary for

Jack Black and a non-stop parade of fart and wee jokes. Painfully unfunny, it's also packed with shockingly poor visual effects. This multi-disc set includes both 2D and 3D Blu-rays of the film, both of which are technically competent, although the converted 3D is pretty ineffectual. The 2D disc also offers loads of extras including deleted scenes, production featurettes and a spoof TV show about the Bermuda Triangle. **AvB**



## Legend of the Guardians: 3D

Warner → All-region BD → £30 Approx



Better known for such blood-strewn action as *Watchmen*, Zack Snyder turns his director's hands to

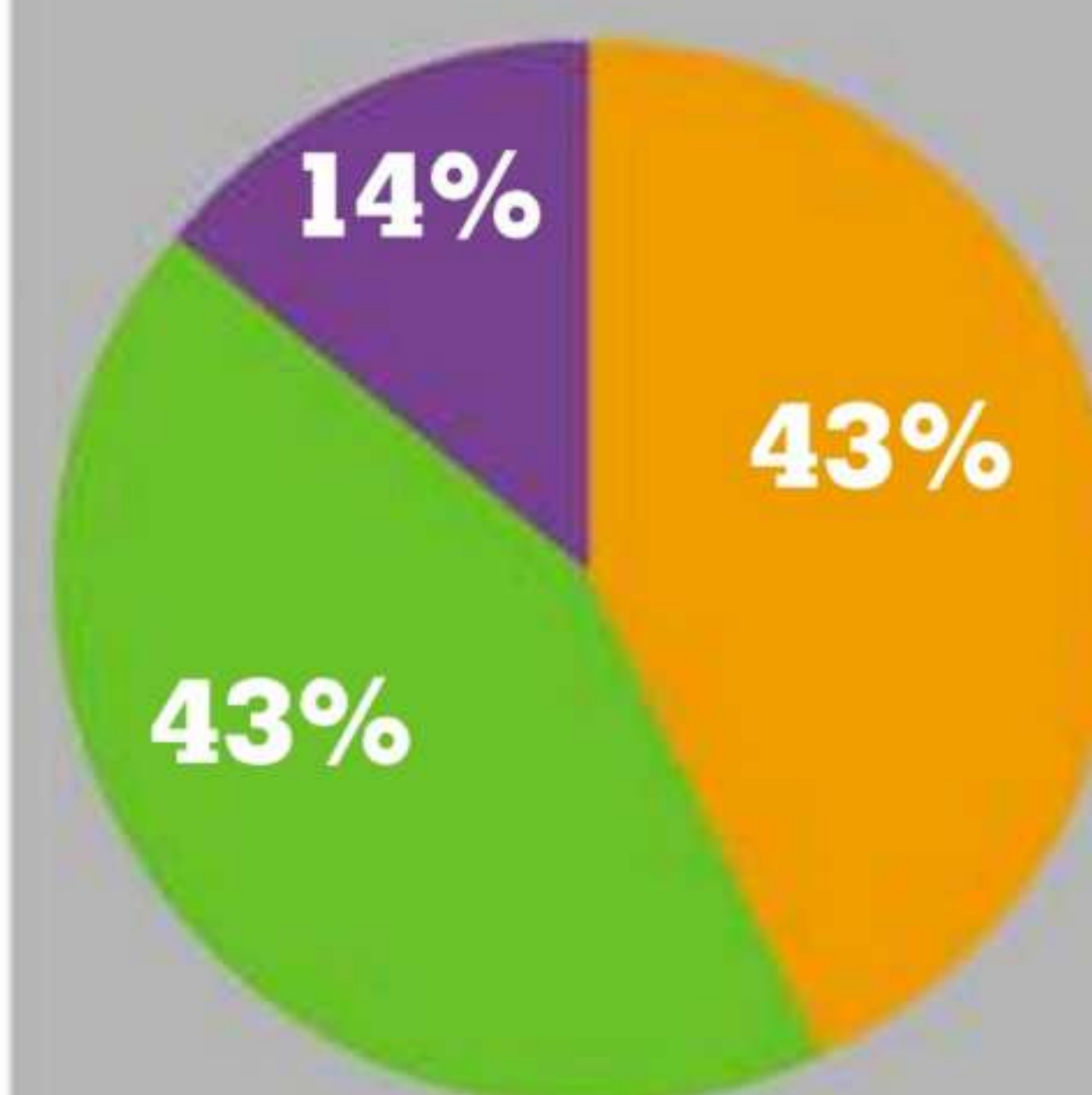
family-friendly CG animation for this tale of a young owl, who sets out through all of the usual fantasy adventure tropes in order to save his homeland from the evil Pure Ones. It's innocuous and predictable stuff, made marginally more watchable on Blu-ray by the sensational HD imagery (in both the 2D and 3D incarnations included in this set), thrilling DTS-HD MA 5.1 audio and generous extras that include an interactive 2D viewing mode. **AvB**



## We asked you...

Will you be getting the *Lord of the Rings: Extended Edition Blu-ray boxset*?

- Yes!
- No!
- It depends on the reviews



Results of poll from [www.homecinemachoice.com](http://www.homecinemachoice.com)

# Follicle-based tale gives fluffy feeling

If Disney's signature cuteness is your bag, this one will wrap you up in cotton wool

**Tangled** is typical of Disney's approach to a classic fairy tale. Gone are the darker elements of the Brothers Grimm's *Rapunzel*, and in its place we have a sprightly CG-animated romp full of musical numbers, romance, life lessons and cute animal sidekicks. But, as previous Disney classics have shown, that's no bad thing. Nobody does this sort of film better than the 'House of Mouse', and *Tangled* delivers plenty of laughs, action and heart for all the family.

**Chris Jenkins:** This set serves up two Blu-ray platters – one containing a 'flat' AVC 1.78:1 1080p encode, the other a stereoscopic MVC 1.78:1 1080p version. Suffice to say that whichever you opt to watch, the results are equally breathtaking, benefiting from exquisitely rendered colours, superb detailing and remarkable clarity. None of this should be too surprising in the 2D version, as we're all familiar with the hi-def picture quality Disney has delivered for its CG animations in the past.

But the 3D version looks just as good, if not slightly better, thanks to the beautiful use of depth in the image. There are no annoying gimmicks poking you in the eye, instead *Tangled* simply wants to wrap you up in an intoxicatingly three-dimensional world check out like Chapter 8's lantern scene to see what I mean.

**Mark Craven:** *Tangled*'s DTS-HD MA 7.1 soundtrack is every bit as three-dimensional as its imagery (unless you're watching the 2D version, but you know what I mean). Sequences such as the escape from the tidal wave of water rushing through the broken dam in Chapter 6, make expansive and thrilling use of the entire



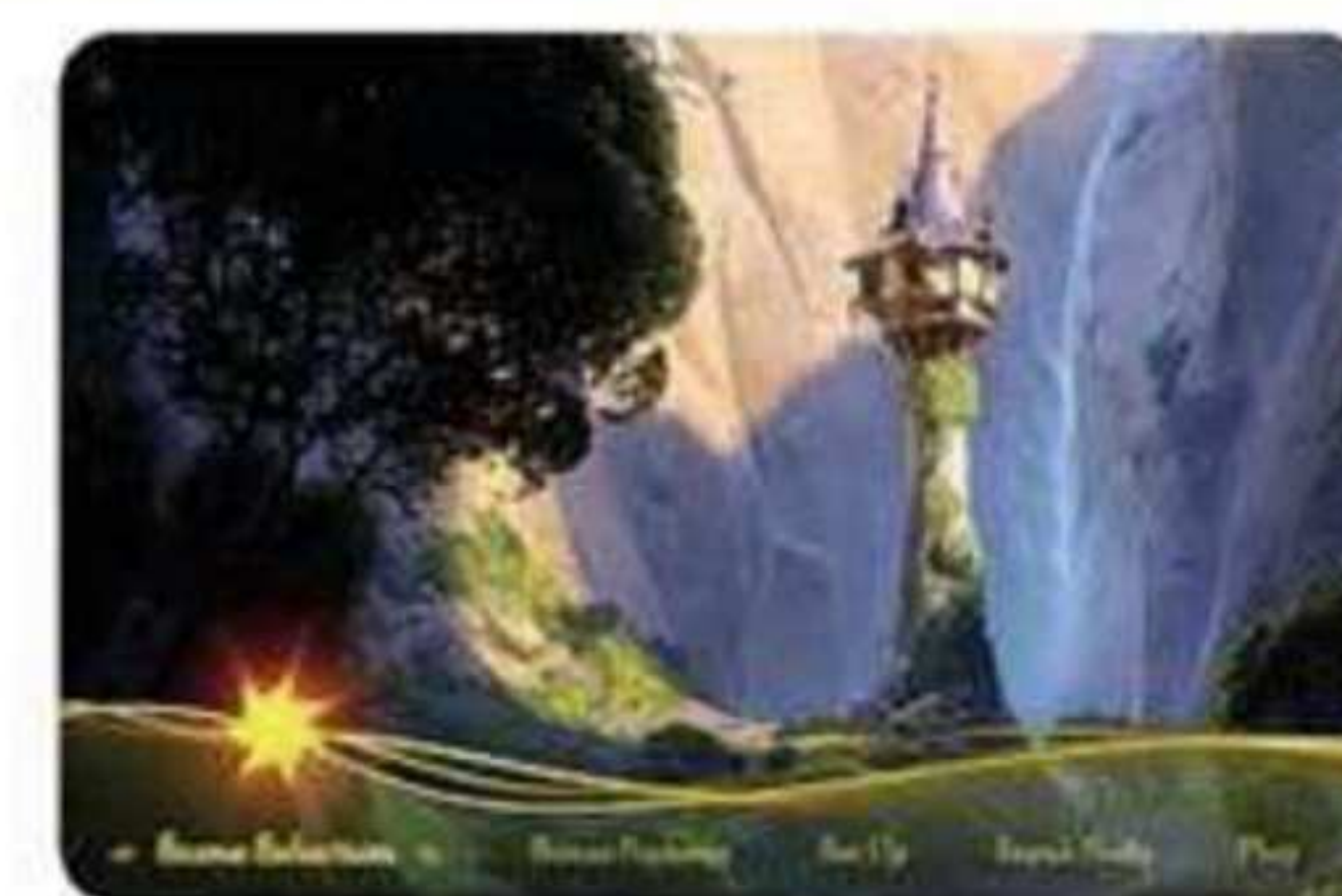
Who are you calling Prince William?



soundstage, boasting incredible precision and steering. And there's also some surprisingly hefty bass at work in these scenes as well.

Elsewhere, the musical numbers sound magnificent (even if the songs themselves really aren't that hot) and the dialogue is silky smooth. **Anton van Beek:** *Tangled* marks a milestone for Disney, being the 50th of the studio's animated features. But, to celebrate the fact, it's come up with what can only be described as the thinnest collection of extras seen on a Disney animation to date.

There's nothing at all on the 3D disc, while the 2D platter can only muster three deleted scenes in animatic form (one with a fortune-telling monkey), two alternate openings, two extended songs, a 1-2min *Making of...* promo and a brief countdown of all 50 Disney animated features. A real shame.



## HCC VERDICT

*Tangled: 3D Super Play*  
Walt Disney → All-region BD  
£30 Approx

**We say:** Disney has scored another hit with this Blu-ray

Picture: 1 2 3 4 5

Sound: 1 2 3 4 5

Extras: 1 2 3 4 5

Movie: 1 2 3 4 5

Overall: 1 2 3 4 5



# Hitman takes on an apprentice

Statham fans will be in transports of delight as the revenge killing story lands on Blu-ray



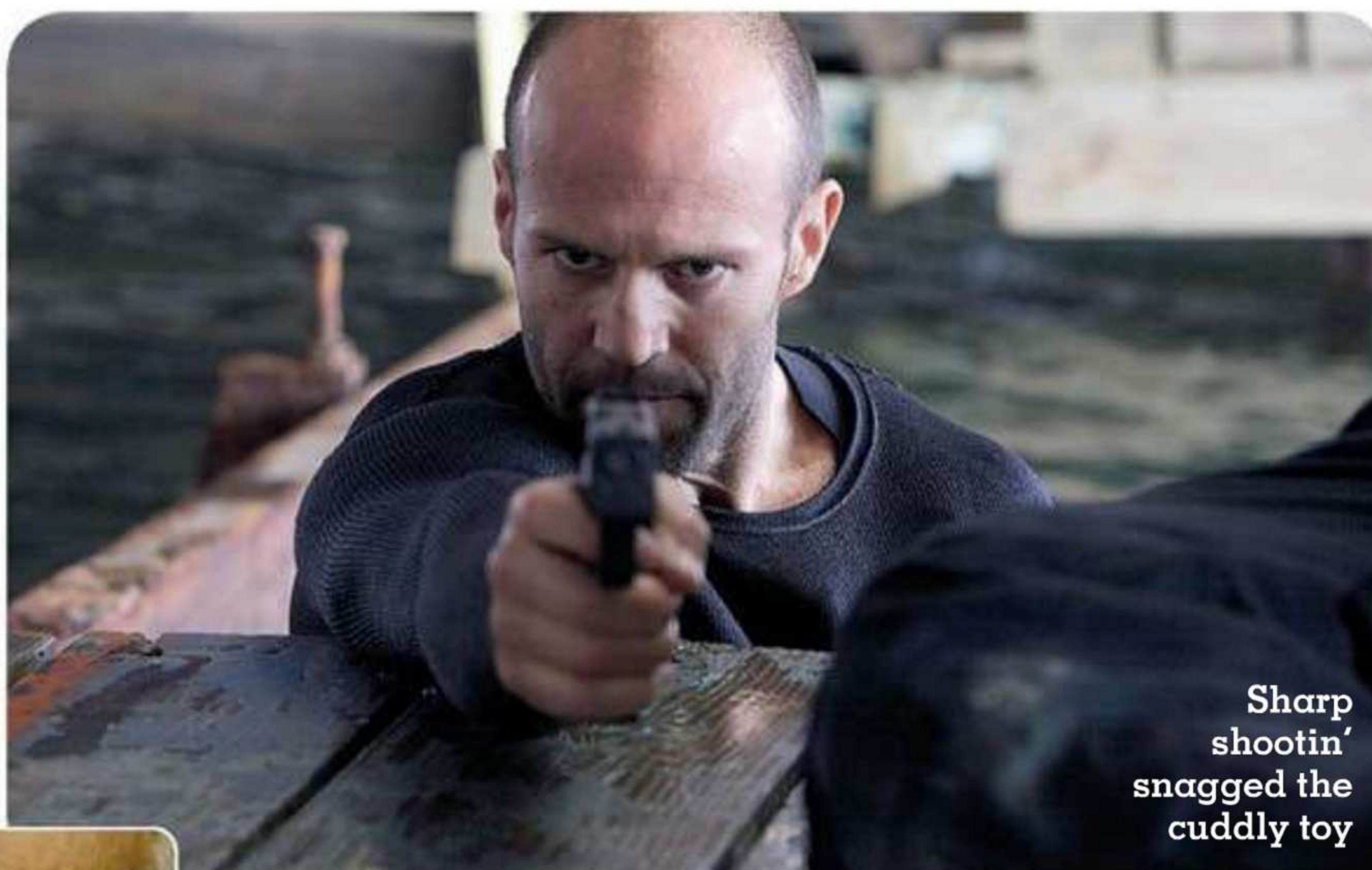
**The Mechanic** isn't a film about the trials and tribulations of a wannabe Kwik-Fit fitter. It's actually a remake of the 1972 Charles Bronson movie of the same name, with *HCC* favourite Jason Statham taking over as the burly bloke who makes his living 'fixing things' (ie. killing people). With its undemanding student-teacher story and predictable twists, the film doesn't add anything to the genre that you won't find in numerous straight-to-DVD flicks. But *The Mechanic* does pack some great action and the chance to see Stath kicking ass again, which should keep fans happy for a couple of hours.

**Chris Jenkins:** Initial impression of *The Mechanic's* AVC 2.40:1 1080p encode aren't great. The colours and contrast in the opening sequence have been tweaked so much that it's impossible to get a grip on detailing or black levels.

Thankfully, after this it settles down to a more traditional, gritty look backed up by the usual orange and teal colour scheme that Hollywood

colourists seem to love these days. From here on, visuals become more impressive with excellent detailing and rich colour reproduction throughout.

**Mark Craven:** The DTS-HD MA 5.1 soundtrack is a real mixed bag. On the plus side, it's full of all the usual acoustic thrills you'd associate with an action picture, including booming bass, and frequent use of the surround channels to create a convincing three-dimensional soundscape. Unfortunately, the dialogue in some scenes gets



Sharp shootin' snagged the cuddly toy



buried in the mix – so much so that I ended up sticking the subtitles on – and the overall soundmix is more heavy-handed than inventive.

**Anton van Beek:** While it's no classic, *The Mechanic* certainly deserves

better than the miserly collection of extras assembled here. All that's on offer are the trailer, a ridiculously short behind-the-scenes featurette entitled *Tools of the Trade: Inside the Action* and five Deleted Scenes (and these actually turn out to be four extended scenes and an alternate, nay, superior, ending to the opening sequence). On the plus side, the extra scenes and featurettes are presented at 1080p, although the trailer is only in plain old 576p.

## HCC VERDICT

The Mechanic → Momentum Pictures → Region B BD £20 Approx

**We say:** This routine action flick scores some great visuals, but the audio is hit-and-miss

Picture: 1 2 3 4 5

Sound: 1 2 3 4 5

Extras: 1 2 3 4 5

Movie: 1 2 3 4 5

Overall: 1 2 3 4 5

## Sanctum

Universal Pictures → All-region BD → £25 Approx



Based loosely on a real caving incident involving producer Andrew Wright back in the '80s, this

spelunking thriller smacks of *The Descent*, only without the monsters, good performances, convincing sets, or any sense of tension. In other words it's a dud, and one that looks flat and lifeless (at least in this 2D VC-1 1.78:1 1080p incarnation – the 3D version wasn't available in time for review). At least the DTS-HD MA 5.1 audio tries to spice things up a bit. Extras include a commentary, *Making of...* and an archival documentary about the 1988 Nullabor caving accident. **AvB**

1 2 3 4 5

## NEDS

Entertainment One → Region B BD → £20 Approx



Peter Mullen's latest explores how a gifted schoolboy has his bright future taken away from him as

outside forces push him into the violent gangs of NEDs (Non-Educated Delinquents) who roam the estates in '70s Glasgow. It's an unflinching and angry film, leavened by a vein of black humour and astonishing performances from the young cast. The film arrives on Blu-ray with a suitably grim and grainy AVC 2.40:1 1080p encode, although the DTS-HD MA 5.1 audio isn't given too much to work with. Extras are limited to nine deleted scenes and a 23-min Q&A with the writer/director. **MC**

1 2 3 4 5

## Biutiful

Optimum → Region B BD → £23 Approx



Director Alejandro González Iñárritu may have abandoned the multiple narrative concept of his earlier

films, *Amores Peros* and *Babel*, but his latest gloomy drama is as heavy going as ever, tackling guilt, fatherhood and death. Its saving grace, though, is the powerful central performance by Javier Bardem, who appears in almost every frame. The Blu-ray's AVC 1080p encode does a good job with tricky source material (shot on different stocks at varying aspect ratios), which the atmospheric DTS-HD MA 5.1 mix complements perfectly. Extras include interviews and a video diary. **MC**

1 2 3 4 5

## Chico & Rita

Icon → Region B BD → £18 Approx



Post-war Cuba and NYC provide the backdrops for this tragic-comic love story about a young

pianist and the beautiful singer he falls for. While the story and characters feel too thin for live-action treatment, as animation they are as archetypal and engrossing as anything Disney has ever produced – only given a refreshingly adult twist. The Blu-ray extras are few – just a commentary, *Making of...* and trailer, compensated with a vibrant AVC 1.85:1 1080p encode and sumptuous DTS-HD MA 5.1 mix that makes the most of the film's jazz-fuelled backdrop. **AvB**

1 2 3 4 5



# Kubrick's kudos is served up in a box

Make a place in your Blu-ray library for this collection of classic films



## Stanley Kubrick: Visionary Filmmaker Collection

is quite a lofty title for a Blu-ray boxset. But then again, it's one that is wholly justified by the career of this methodical and meticulous filmmaker who only completed 13 feature films in his 46-year career. Seven of the best known of those films are collected here including: *Lolita*, *2001: A Space Odyssey*, *A Clockwork Orange*, *Barry Lyndon*, *The Shining*, *Full Metal Jacket* and *Eyes Wide Shut*. It's a remarkable set of cinematic landmarks, each of which truly from being available to watch again and again, as Kubrick crams so much into every movie that they often don't begin revealing their true colours until a third or fourth viewing.

**Chris Jenkins:** Fans will undoubtedly be familiar with the quality of these repackaged films' VC-1 1080p encodes (which ranges from great to disappointing). Of much more interest this time around is the new two-disc edition of *A Clockwork Orange* and the first hi-def versions of *Lolita* and *Barry Lyndon*.

Unfortunately, anybody expecting an improvement in *A Clockwork Orange*'s problematic VC-1 1.66:1 1080p encode will be disappointed, as this second incarnation looks exactly the same, right down to the digital noise and crushed blacks. Meanwhile, *Lolita* and *Barry Lyndon* fare better. The film grain looks a bit mushy at times in the former's AVC 1.66:1 1080p encode, but otherwise the black and white imagery holds up well, with accurate contrast and reasonable detailing for a film of this vintage. *Barry Lyndon*'s AVC 1.78:1 1080p encode works hard thanks to the film's softly diffused visuals, but copes okay, with no obvious noise in the dark

interiors. Grain structure is heavy but consistent, and the entire image is very filmic.

**Mark Craven:** The four previously available discs retain their perfectly decent LPCM 5.1 soundtracks, while the three new discs get new DTS-HD Master Audio mixes (but it's hard to detect any real difference between *A Clockwork Orange*'s new DTS-HD MA 5.1 track and the old version's LPCM surround mix). But that's no bad thing, as it gives priority to the clear dialogue, while also providing plenty of range for the marvellous score. Just don't expect too much from the surrounds.

*Lolita* sticks with a DTS-HD MA presentation of the original mono mix and sounds about as good as you'd hope. The mix is technically proficient and free from audio glitches, while dialogue and music come through loud and clear. *Barry Lyndon*'s DTS-HD MA 5.1 mix isn't particularly dynamic (with the rears barely getting into the action beyond crowd noises and the odd roll of thunder), but on a purely technical basis, fans should be quite happy with this respectful surround sound upgrade.

**Anton van Beek:** The biggest let down here is that the two films making their Blu-ray debut come with nothing beyond their respective trailers (in 480p). The two-disc upgrade of *A Clockwork Orange* adds a couple of new featurettes to the film disc, along with the commentary, trailer and two previous featurettes, while moving Malcolm McDowell's career retrospective, *O Lucky Malcolm*, to a second disc, alongside the brilliant 142-min documentary *Stanley Kubrick: A Life in Pictures*. The other discs are unchanged, serving up some brilliant audio commentaries, interviews and documentaries.



## HCC VERDICT

Stanley Kubrick: Visionary Filmmaker Collection → Warner Home Video → All-region BD → £60 Approx

We say: Several of these classics still need more TLC in HD

Picture: 1 2 3 4 5

Sound: 1 2 3 4 5

Extras: 1 2 3 4 5

Movie: 1 2 3 4 5

Overall: 1 2 3 4 5





# Living cadavers walk tall

Six TV episodes of flesh eating and gore knock the running sores off zombie movies



**The Walking Dead: The Complete First Season** is a must-see for any fan of the undead. Coming from AMC – the same channel that gave us *Mad Men* – and overseen by Frank ‘*The Shawshank*

*Redemption*’ Darabont, this adaptation of Robert Kirkman’s award-winning comic book is probably the best thing to feature the living dead since George A. Romero’s original zombie trilogy. This is truly adult horror; an intelligent and intense show that focuses as much on the everyday horrors the survivors must endure as it does on flesh-eating corpses. Of course, if you are just here for the zombies, then rest assured that it also packs more gore and thrills into its six episodes than all of the *Resident Evil* films put together.

**Chris Jenkins:** If *The Walking Dead* doesn’t look quite as sparkling as some other high-profile US TV



## HCC VERDICT

The Walking Dead: Complete First Season → Entertainment One → Region B BD £35 Approx

**We say:** Great horror series let down by lifeless extras

Picture: 1 2 3 4 5

Sound: 1 2 3 4 5

Extras: 1 2 3 4 5

Movie: 1 2 3 4 5

Overall: 1 2 3 4 5

shows on Blu-ray, that’s because it was primarily shot using 16mm cameras. This serves to give the series a rough-hewn aesthetic that matches its tone. Taken on their own merits, the six AVC 1.78:1 1080p encodes spread across this two-disc set are very pleasing, full of rock-solid blacks and bold colours. Given its 16mm origins, it’s no surprise that there’s plenty of grain in the image, but it’s extremely well delineated and doesn’t obscure fine details.

**Mark Craven:** The sound designers on this show clearly had a ball playing around with a full 5.1 soundscape and have cooked up something that often belies its origins as weekly televised entertainment. When the action heats up the DTS-HD MA 5.1 soundtracks come into their own; the pilot episode alone has two spectacular sequences that give your system a full workout (one involving a car crash, the other a tank surrounded by the undead). Thrilling stuff that’ll have you checking back over your shoulder to make sure there isn’t a zombie sneaking behind you for a quick bite.

**Anton van Beek:** This superb show is really crying out for some quality extras. Instead, we’re just stuck with a bunch of stuff that was clearly made to promote the series online. The only really substantial content is a fairly extensive 30-minute *Making of...* featurette and a 12-minute convention panel with the producers.

The rest boils down to mini-featurettes, offering short interviews, set visits and a look at the making of each specific episode. None of which is too exciting, although the zombie makeup tips are a lot of fun, and have given me a few ideas to try out when Halloween comes around.



## I Saw the Devil

Optimum → Region B BD → £23 Approx



Korean director Kim Jee-woon’s latest film is a real surprise. Running for almost 2.5 hours and feeling

like an Italian Giallo, filtered through the sort of cinematic culture that brought us *Old Boy*, this dark and violent thriller has shot straight to the top of my list of the year’s best films, thanks to its shocking twists and turns and superb performances. While the BD is light on extras – just interviews, behind-the-scenes footage, trailer and TV spot – it does deliver a rich and detailed AVC 1.85:1 1080p encode and deep and wide-ranging DTS-HD MA 5.1 soundtrack **AvB**

1 2 3 4 5

## The Fifth Element

Pathé → Region B BD £20 Approx



Luc Besson’s high camp sci-fi makes a belated HD debut in the UK, but how does it compare to the two

Sony Pictures Blu-rays already out in the US? Well, Pathé’s sharp and colourful AVC 2.35:1 1080p encode has a better source than the soft, dirty print Sony used for the first US Blu-ray. But it’s not quite up to the standards of the subsequent 2007 remaster, owing to blooming contrast levels that blow out some of the fine detail. I’ve no complaints about the stellar DTS-HD MA 5.1 audio, and this version beats both US Sony discs by delivering plenty of bonus features. **AvB**

1 2 3 4 5

## Never Let Me Go

20th Century Fox → Region A/B BD → £25 Approx



This adaptation of Kazuo Ishiguro’s celebrated sci-fi novel eschews the special effects and

spectacle that have come to define the genre post-*Star Wars*. Instead, this moving film about love and loss centres on a fascinating ethical dilemma and a trio of astonishing performances from Carey Mulligan, Andrew Garfield and Kiera Knightley. Although the disc is light on extras (just art galleries and a 30-min *Making of...*) and the DTS-HD MA 5.1 mix doesn’t have too much to work with, it makes up for this with a dazzling and flawless AVC 2.40:1 1080p encode. **AvB**

1 2 3 4 5

## Blue Valentine

Optimum → Region B BD → £23 Approx



This brilliantly honest deconstruction of a marriage presented a technical challenge for the Blu-ray

encoders, as it cuts back and forth between the relationship’s end (shot in sleek HD using Red One cameras) and how it all began (shot on ultra-grainy Super16). So it’s especially impressive that this AVC 1.66:1 1080p encode does such an snorting job of handling both with no technical issues or obvious compromises. This excellent treatment of the film extends to some very good extras, including a commentary, a 40-min Q&A with the cast and crew, and a couple of home movies. **AvB**

1 2 3 4 5



## Cross of Iron

Optimum → Region B BD  
£20 Approx



Set on the Russian front in 1943, Sam Peckinpah's remarkable anti-war film stars James

Coburn as a disillusioned German sergeant who ends up pitted against his arrogant and glory-seeking new Prussian commander. Optimum's Blu-ray delivers a pleasingly film-like AVC 1.85:1 1080p encode that combines good detailing with convincing grain structure, plus clear (if limited) LPCM 2.0 audio. Neat extras include interviews (both new and old, some audio-only), trailers and even two TV commercials Peckinpah and Coburn shot while promoting the film. **MC**



## The Thin Red Line

20th Century Fox → All-region BD  
→ £20 Approx



Terrence Malick's ensemble piece about the cost (both human and spiritual) of the Battle of

Guadalcanal isn't necessarily for fans of the more traditional heroics of *Saving Private Ryan*, but is still a remarkable slice of cinema. This new HD platter draws upon the same materials used for last year's Criterion Collection disc in the US. As such, the AVC 2.40:1 1080p visuals and DTS-HD MA 5.1 soundtrack are both corkers. Most of the extras have also been brought over, including a commentary, three retrospective featurettes and eight deleted scenes. **AvB**



## The Princess Bride

Lionsgate → Region B BD  
£20 Approx



As inconceivable as it seems, William Goldman's genre-twisting fairy tale flopped at the

box office on release in 1987. Thankfully, the past two decades have seen the film find an appreciative audience, first on VHS, then on DVD. Now it can finally be enjoyed in all of its glory thanks to this stunning Blu-ray edition, which should only win it even more fans. Not only does the disc carry over all of the extras from the previous DVD Special Edition and get a lively DTS-HD MA 5.1 audio upgrade, it also features a AVC 1.85:1 1080p encode that shows how beautiful late '80s films can look. **AvB**



## Dr Who: Mannequin Mania

2entertain → R2 DVD  
£30 Approx



The Time Lord faces off against some particularly perilous plastic in this double-bill.

A re-remastered version of John Pertwee's debut story, *Spearhead from Space* is joined by the DVD debut of its sequel *Terror of the Autons*, which also marks the debut of iconic villain The Master. Shot entirely on film and given a polish up, *Spearhead...* looks incredible, while *Terror...* holds up fairly well considering that all the restorers had to work with was a black and white 16mm off-air recording and an NTSC colour copy. **AvB**



# Classic clever horror loses razor edge

'Same old, same old' best describes this Blu-ray triple serving of the franchise

## The Scream Trilogy

finds director Wes Craven and writer Kevin Williamson (replaced by Ehren Kruger for the third outing) in full-on, post-modern mode, deconstructing the slasher genre for a new generation of horror fans. Unsurprisingly, it's the original *Scream* that still stands up best, being an effective piece of horror cinema as well as a fun commentary on the sub-genre. *Scream 2* follows the sequel path of upping the body count, but fails to offer anything really fresh, while *Scream 3* misses the point and is a total dud.

**Chris Jenkins:** All three films feature AVC 2.40:1 1080p encodes, but the picture quality across them is rather hit-and-miss. *Scream* is the worst of the bunch, thanks to some egregious edge enhancement that's clearly been employed to sharpen up an old master; it's safe to bet that this is the same one used for the old DVD release, as is undoubtedly true of the subsequent films as well. Things pick up a bit with *Scream 2*, which boasts better detailing for the most part, but also features the odd 'mushy' texture and more edge enhancement. Visually, *Scream 3* is the best, looking much sharper and more natural than both its predecessors.



**Mark Craven:** While the HD picture quality is mediocre at best, the DTS-HD Master Audio 5.1 soundtracks served up by these Blu-rays is much better. All three films play around with all of the usual slasher movie standards – be they loud bursts of music or somebody suddenly jumping

up from one side of the screen or the other. Indeed, audio placement on all three is very good, aided by natural panning across the speakers and a very robust low-end.

**Anton van Beek:** Final proof that these discs were compiled by simply dusting off the materials created from the ageing DVDs comes from the extra features. There's absolutely nothing new here, just the same audio commentaries, deleted scenes, featurettes, trailers and outtakes that fans have seen and heard before.

Rather more annoyingly, we're still stuck with the cut version of *Scream*, which lacks any of the more gory deleted/alternate scenes.

Also missing are all of the extras from the bonus disc bundled with the 11-year-old *Ultimate Scream Collection* R1 DVD boxset, which included additional outtakes, screen tests, TV spots and the *Behind the Scream* documentary.



## HCC VERDICT

Scream Trilogy  
Lionsgate → Region B BD  
£50 Approx

**We say:** This mediocre Blu-ray boxset is unlikely to have fans screaming with joy

Picture: 1 2 3 4 5

Sound: 1 2 3 4 5

Extras: 1 2 3 4 5

Movie: 1 2 3 4 5

Overall: 1 2 3 4 5

## Law of diminishing returns:

As the *Scream* trilogy progress (from L-R) the movies get worse





# THE TOP 20



“..the majority of home cinema systems selected and installed on a DIY basis (that is without professional input) are performing at way below their optimum level.”

**Choosing a home cinema system is a potential minefield that must be negotiated with great care or safely avoided by letting experts guide you. If you want to end up with a system that, as a minimum, meets your expectations in terms of picture and sound quality, reading magazine product reviews and choosing the recommendations, five-star favourites or best buys can only ever be part of the answer at best. Looking for the cheapest price and having a system delivered to your door, even with a ‘knowledgeable’ friend to help set it up, is a well-trodden path to disappointment.**

There is a bewildering choice of components on the market today and also different ways in which components can be installed and connected together. Which sort of visual system do you go for? Projector and screen, or plasma, LCD or LED TV? 3D or non-3D? Full 1080p capability is now the only sensible choice but the appropriate source components, such as a Blu-ray player, need to be part of the equation. The sound performance of a system is also hugely important, even more so if you will be listening to music, or music DVD’s, through

the same system. If so, you need an amp that approaches the performance of a decent 2-channel hi-fi amp, which is not that easy to find. Having an amp with the right inputs for the best connectivity is essential but you will also need to decide on a 5.1 or 7.1 speaker system, passive or active sub and, crucially, where they will be sited for the best results. In short, it’s complicated and very fertile ground for getting it wrong.

## ACHIEVING POTENTIAL

To select a system, you could choose a collection of ‘Best Buy’ components in the hope that they will be a great combination. Maybe, but probably not. You could buy a pre-packaged all-in-one system from one manufacturer. This is almost certainly not the best route either as you will miss out on enormous potential. From informal surveys conducted, it appears highly likely that **the majority of home cinema systems selected and installed on a DIY basis (that is without professional input) are performing at way below their optimum level.** To compound matters, most are also ill-matched to the room in which they are installed and are, in reality, the wrong system. Without considerable knowledge or experience, high quality home cinema is not a suitable DIY activity.

Our aim must be to buy a home cinema system that will provide an excellent picture

quality plus an audio delivery that will match, or even better, the commercial cinema experience. It must be exciting, reliable and deliver true value for money.

## WHAT AND WHERE TO BUY

To ensure a home cinema system is right for you, where do you start? Here’s an important tip ...**don’t** start with **WHAT**, start with **WHERE**. There’s only one way to give yourself the best chance of getting it right first time, and that’s through a specialist AV dealer. It’s possible you have preconceived ideas that put you off visiting one. Although you would welcome the advice and guidance, you don’t know the technical jargon. You don’t want to be talked down to. Your friend has said they only sell expensive gear and they’re not interested if you don’t have a big budget. They’re expensive. These are just myths.

Most specialist AV dealers are running their business because, above all, home cinema is their hobby. They spend a large portion of their time comparing systems to get the best possible results. They know the component combinations which don’t gel together and, conversely, they know the combinations which give the best performance within a given price range. Very importantly, they know how to get a system working to its optimum. But they all also know the system must suit **you**.



# GUIDE

## TO BUYING HOME CINEMA

LISTED BELOW ARE 20 OF THE BEST AV SHOPS IN THE COUNTRY.

They have been selected because they are known to do an excellent job in guiding customers towards home cinema systems that will provide years of superlative performance and total satisfaction.

### BUYING OR BEING SOLD TO?

There are dealers around, web based or otherwise, who will sell you anything you are willing to pay for. They may be a bit cheaper but that's all they offer. Now there's a carefully selected group of long-established specialist dealers who are totally committed to putting the customer first. Their idea of 'selling' is to discuss your requirements, offer their advice, give you the best options, then play the systems for you and allow you to be the judge. You'll probably be surprised and, almost certainly, relieved to discover how easy it is to see and hear the differences between components and between systems. You'll be able to make a clear and informed decision about what to buy.

The story doesn't end there. These shops won't abandon you once you've put your hand in your pocket. They won't leave you to set up the system you've selected as best you can. They'll install it in your home, make sure it performs to its best, and ensure you're entirely happy with the way it works. Why? Because a high proportion of these dealers' custom comes through people who have bought from them before, either directly or by recommendation. It's vital to them to get it right for you.

### GETTING THE BEST DEAL

Unless you've got money to burn, you'll be living with your new system for years. Most of these dealers offer much longer equipment guarantees than provided by the manufacturer, a very worthwhile benefit, but it also makes it in the dealer's interest to ensure high build quality and reliability. Maybe you could save a few pounds by buying piecemeal but you'll lose out on the overall package. As far as the dealers are concerned, they believe that taking care of their customers properly is a far better way of doing business than just handing over boxes.

### OUR TOP 20 UK SPECIALIST AV DEALERS

#### SOUTH

##### **Chelmsford** RAYLEIGH HI-FI SOUND & VISION

216 Moulsham Street. 01245 265245  
www.rayleighhifi.com

##### **Colchester** RAYLEIGH HI-FI SOUND & VISION

33 Sir Isaac's Walk. 01206 577682  
www.rayleighhifi.com

##### **Kingston-upon-Thames** INFIDELITY

9 High Street, Hampton Wick.  
020 8943 3530  
www.infidelity.co.uk

##### **Maidenhead** AUDIO VENUE

36 Queen Street. 01628 633995  
www.audiovenue.com

##### **Rayleigh, Essex** RAYLEIGH HI-FI SOUND & VISION

44a High Street. 01268 779762  
Custom Install Dept.  
01268 776932  
www.rayleighhifi.com

##### **Southend-on-Sea** RAYLEIGH HI-FI SOUND & VISION

132/4 London Road. 01702 435255  
www.rayleighhifi.com

##### **Tunbridge Wells** KENT HOME CINEMA

69 London Road, Southborough.  
01892 535007  
www.kenthomecinema.co.uk

#### LONDON

##### **Ealing** AUDIO VENUE

27 Bond Street. 020 8567 8703  
www.audiovenue.com

##### **N1** GRAHAMS HI-FI

190a New North Road. 020 7226 5500  
www.grahams.co.uk

#### SW11 ORANGES & LEMONS

61-63 Webbs Road, Battersea.  
020 7924 2040  
www.oandlhifi.co.uk

#### MIDLANDS

##### **Coventry** FRANK HARVEY HI-FI EXCELLENCE

163 Spon Street. 024 7652 5200  
www.frankharvey.co.uk

##### **Nottingham** CASTLE SOUND & VISION

48/50 Maid Marian Way. 0115 9584404  
www.castlesoundvision.com

##### **Solihull** MUSIC MATTERS

93-95 Hobs Moat Road. 0121 742 0254  
www.musicmatters.co.uk

#### NORTH

##### **Chester** ACOUSTICA

17 Hoole Road. 01244 344227  
www.acoustica.co.uk

##### **York** SOUND ORGANISATION

2 Gillygate. 01904 627108  
www.soundorg.co.uk

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The majority of the above dealers are members of one or both of the major trade organisations, BADA or CEDIA.

### STAR QUALITIES

VALUE FOR MONEY ..... ★ ★ ★ ★ ★  
SERVICE ..... ★ ★ ★ ★ ★  
FACILITIES ..... ★ ★ ★ ★ ★  
VERDICT ..... ★ ★ ★ ★ ★

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# How we test

*Home Cinema Choice's* hardware reviews combine the subjective opinion of our seasoned reviewers with hard technical data.

**Chris Jenkins** explains how the *HCC* Tech Labs work

**HCC** hardware reviews combine the opinions of our experienced reviewers with objective technical data from our test lab. Here's how we do it...

*HCC's* gear reviews have a long tradition of combining the subjective opinions of experienced reviewers with hard scientific data from our test labs. That way, you can be sure that there's no danger of favouritism or prejudice creeping into the reviews – when we combine the reviewer's opinions with the test data, we can be sure that the results we present to you, the readers, are honest, reliable and accurate.

For over 20 years, we have been developing testing methods for every AV technology from CRT TV and VCRs to the latest 3D flatscreens, multichannel amplifiers and media players. Our testers have been trained by the ISF, Tektronix, Home Acoustic Alliance and other industry bodies, and we use industry-standard testing equipment so we can be confident our results make sense in terms of manufacturers' claims.

Our Tech Labs set-up consists of two main facilities.

## The Viewing Room

Used mainly for testing TVs, projectors and speakers, the Viewing Room is designed to reproduce the conditions found in a typical mid-range home cinema installation. Created by award-winning custom installers Pounds ([www.poundstv.co.uk](http://www.poundstv.co.uk)), it's completely light-proofed for testing of TVs and projectors, is partially soundproofed using Acoustiblok ([www.acoustiblok.com](http://www.acoustiblok.com)), and has been acoustically treated and tuned using custom absorbers and diffusers by the experts at RPG ([www.rpg-europe.co.uk](http://www.rpg-europe.co.uk)).

The room has a resident Crystal Acoustics TX-T2 7.2 speaker system, Onkyo TX-NR5008 receiver and a

Screen Research 100in projection screen. TVs, projectors and other AVRs are moved in as needed for testing. We use a TV stand from Gecko ([www.gecko-furniture.co.uk](http://www.gecko-furniture.co.uk)) for mounting flatscreens. A Philips 46PFL9705H TV is used for 3D movie and games playback. The room is fully cabled with speaker, HDMI, and interconnects from Peerless. Multiple displays can be fed from the same source using a Gefen 2-in-4-out HDMI switcher/splitter, and the room is also equipped with network connections.

The testing equipment used for TVs and projectors is the Chroma5Pro meter and ChromaPure Pro software supplied by Kalibrate Ltd ([www.kalibrate.co.uk](http://www.kalibrate.co.uk)).

This sophisticated tristimulus colorimeter and analysis software allows us to measure functions such as contrast ratio, colour temperature and luminance, all essentials in picture performance.

## The Test Lab

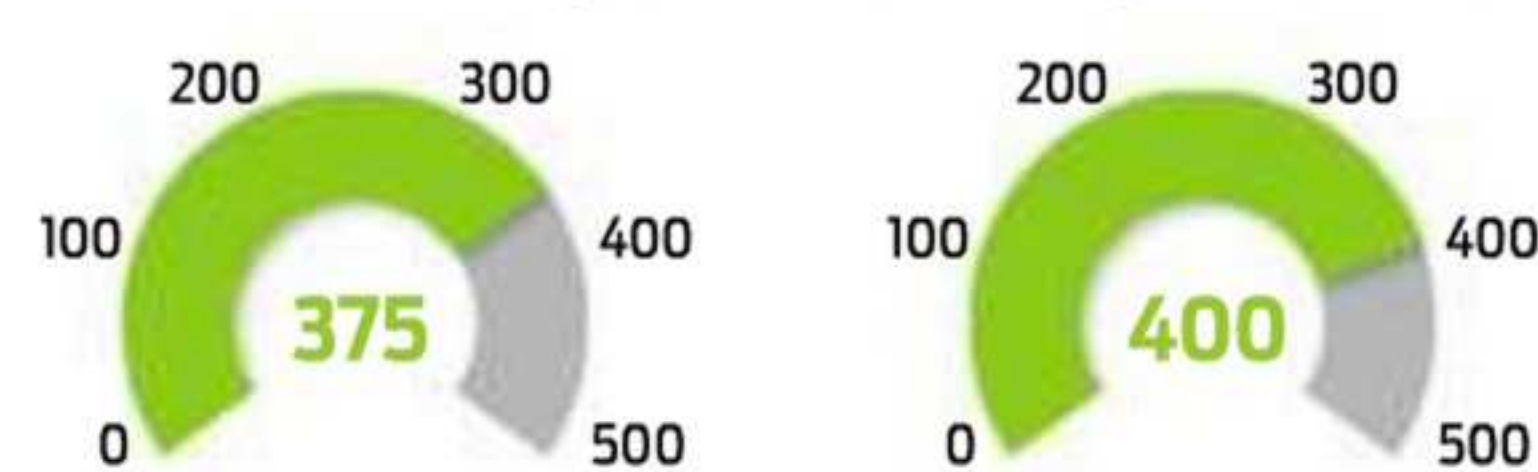
Mainly used for performance analysis of amplifiers and players, the Test Lab is equipped with an Audio Precision APX585 multichannel analyser. This generates programmable test signals, and runs a huge range of tests of functions such as output power, frequency response and distortion. It also has digital audio test functions. A Tektronix VM700 is used for analysis of analogue video signals.

Cables for the test system are again from Peerless.

In addition to the main test units, we use a number of audio and video signal generators from Sencore and Snell & Wilcox, analogue test equipment such as an oscilloscope, mains power meters from Maplin, a library of test and measurement DVDs and Blu-rays (plus all the newest software releases), and standardised digital files for media players.

## Tech Lab tests explained

### TV power consumption: Watts



**White screen:** This is a measurement of a display's power consumption in Watts when displaying a pure white 100IRE signal with muted audio

**Test footage:** Here the power consumption is measured with a looped test sequence of live footage (complete with explosions!) and the audio volume up

### TV contrast: ratio



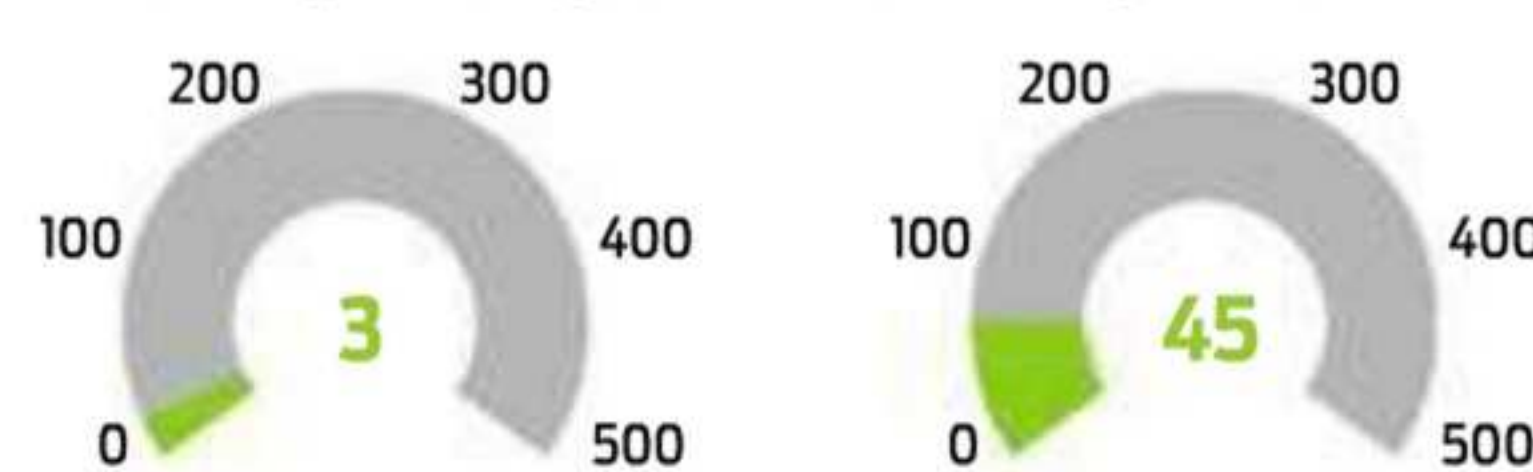
**Picture:** Contrast ratio claims by TV manufacturers are often extravagant, and don't follow an established standard. Our real-world measurements cut through the hype and allow one brand's contrast to be compared with another in a consistent way

### Colour temp: Kelvin



**Preset:** Most TVs default to a picture setting, which is too bright and 'hot' (blue), in order to make them look good in shops, but also have a choice of colour temperature presets. We tell you which of these gets closest to the industry standard setting of 6,500K (D65)

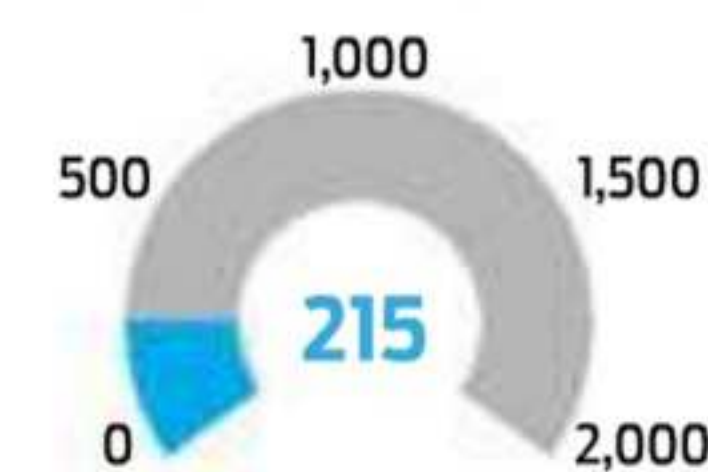
### Blu-ray/DVD power consumption: Watts



**Idling:** By EU regulation, standby power consumption for most devices is now under 1W, so we don't usually measure this; but the consumption when power is on can be considerably higher, so we measure this for DVD and Blu-ray players and some other devices

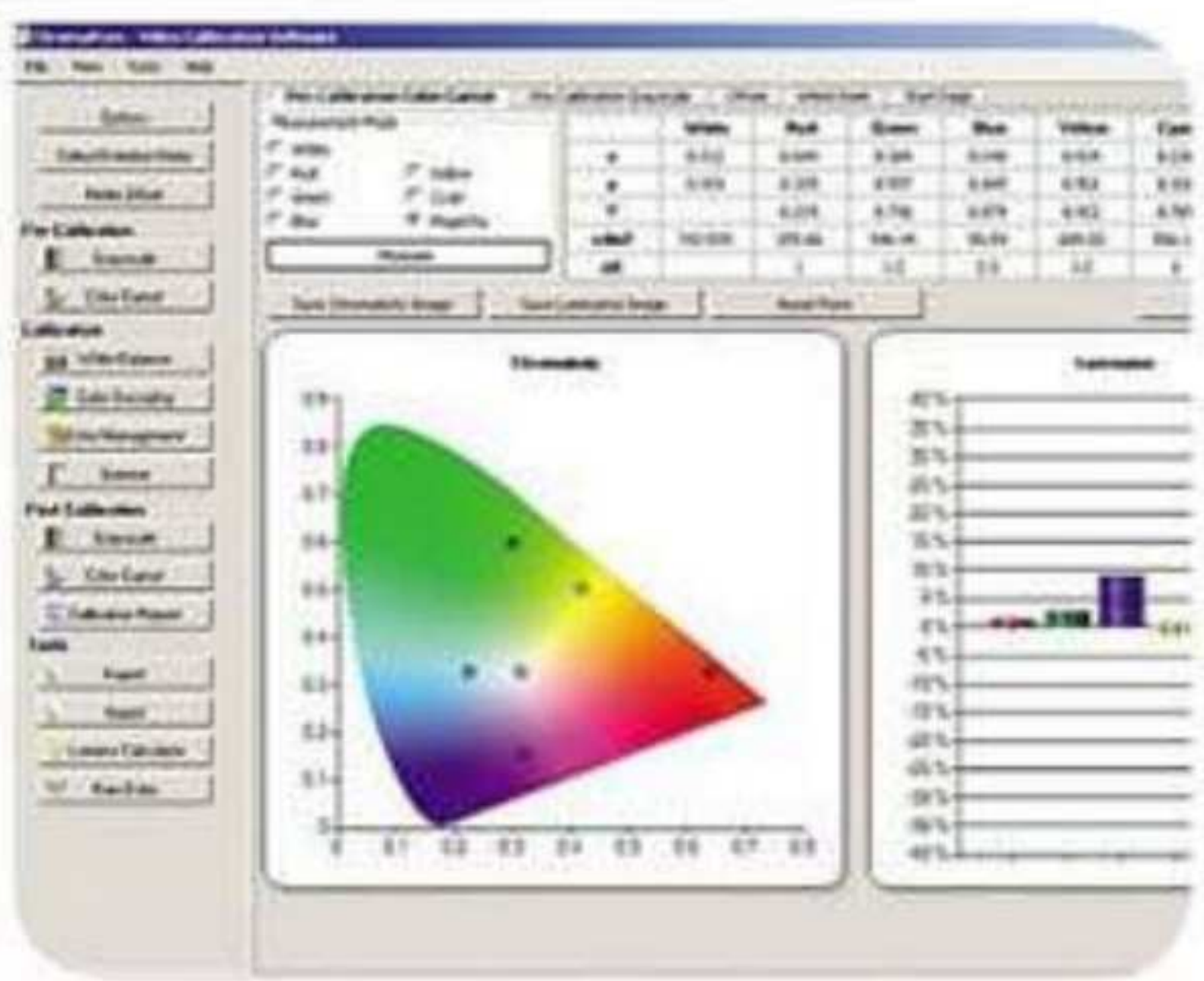
**Playing:** When a disc is spinning, the device's power consumption usually rises, so we measure when playing a standard disc. In theory, media players should display no change in consumption when playing

### Audio Jitter: Ps



**Sound:** The analogue audio jitter from a device such as a Blu-ray player is measured in picoseconds. The lower the number, the better. Though analogue audio output is perhaps rarely used, jitter is often a good indicator of the general build and component quality of many devices





**Test bench:** The Viewing Room (above) simulates a typical home cinema, while the MSI laptop runs test software for the APX585 analyser (right) and ChromaPure system (above right)



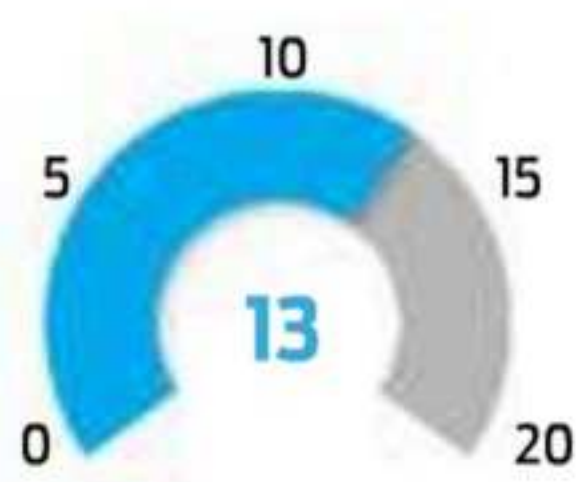
For testing of media software and portable testing applications, we use an MSI GT640 laptop PC with HDMI output and SRS sound.

**Results**

All this testing generates a huge amount of data, which is fed into product reviews and stored on our database. From this we can establish performance averages which

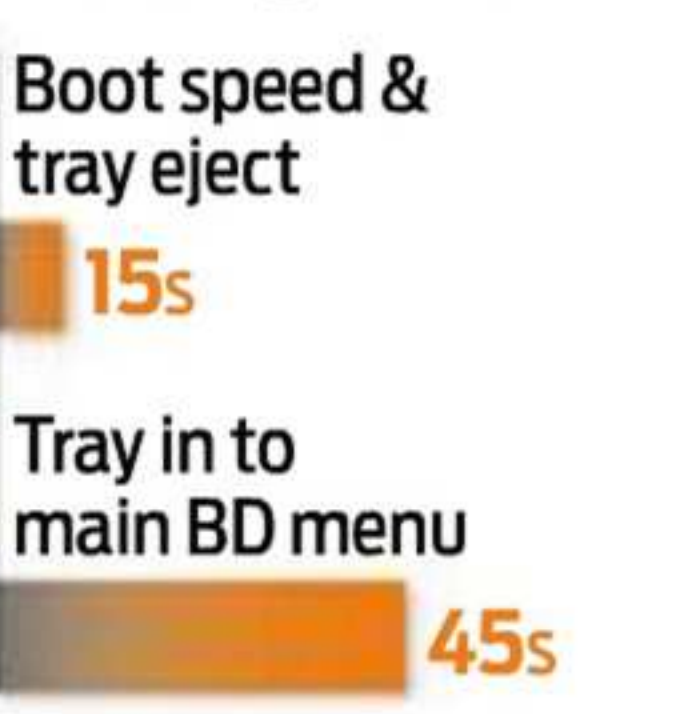
help us to keep our scoring realistic. Of course, this mass of information is too unwieldy and detailed to publish in the magazine unedited, so our next job is to present it in a way which is meaningful and easy to understand. Our graphical presentations (see below) should make it all more digestible. So, while one key reviewer is normally by-lined for our tests, the whole team will have been involved in bringing you results you can rely on ●

**Video Jitter: Ns**



**Vision:** Again, the analogue video jitter of a DVD or BD player may be less relevant when the digital output is normally used, but it is a good indicator of general build and component quality. We also measure other video quality indicators such as chroma crosstalk and frequency response at 5.8MHz

**Loading: Boot/Java**



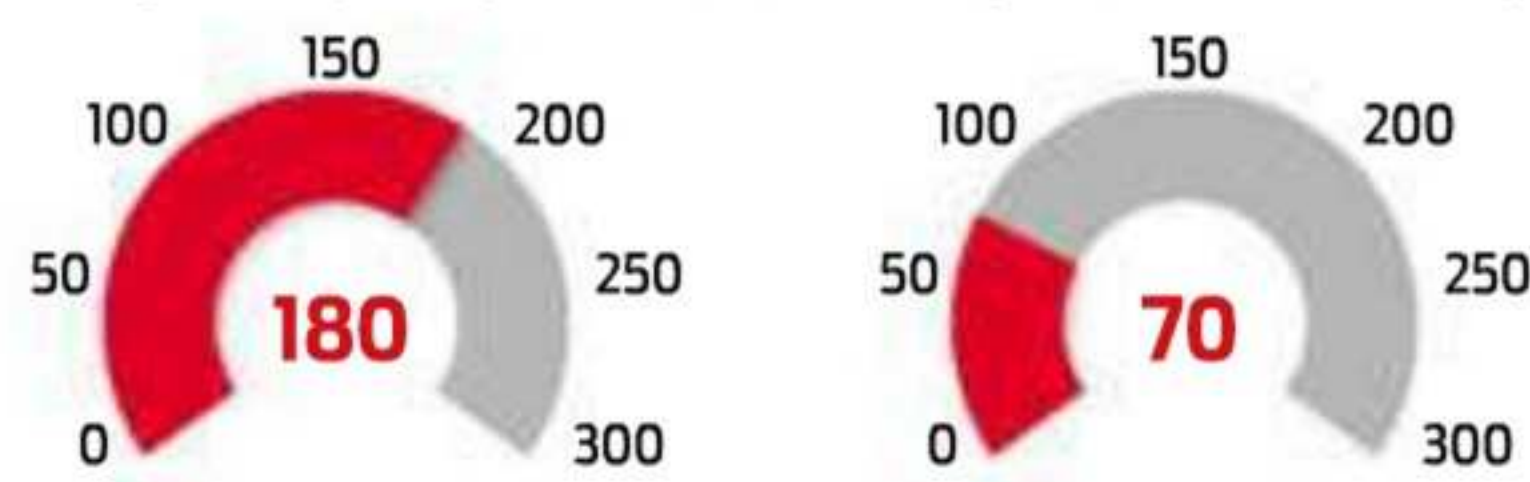
**Disc loading & Java:** Blu-ray disc players can be annoyingly slow to load and play discs, thanks mainly to the DRM and Java content. We measure times from power on to tray opening, and tray in to boot menu on a standard BD disc

**AVR power: Watts**



**Powered:** Power consumption of an AV amp can be high, but it's a requirement of decent output levels. We measure consumption in two states, when idle, and when loaded with a multichannel surround system

**Amp output power: Watts (8Ω, 0.5% THD)**



**2-channel 8Ω:** Manufacturers' claims for amplifier output power can be wildly exaggerated, and testing standards vary widely. Our tests deliver a figure for stereo performance with an 8Ω load, and quote a Total Harmonic Distortion result

**5-channel 8Ω:** In most cases, multichannel performance will not match up to the two-channel figure. We push the products to its limit in multi-channel mode and quote the figure reached before unacceptable distortion results

**Pure power: Watts**



**Fidelity firewall:** This is our way of measuring an amp's output power ability before it is tainted by distortion. We measure at 1kHz with an 8Ω load to 0.05% THD to get an indication both of output power and component quality

**Signal/noise: dB**



**S/N tests:** These amp measurements reveal the ratio of signal to noise at a specific frequency. Low, mid and high readings are taken to determine the imaging and sonic character of the amp



# Feedback

Got an axe to grind? Want to comment on current technology? Need to share? **HCC** is here to help

## Is my telly faulty?

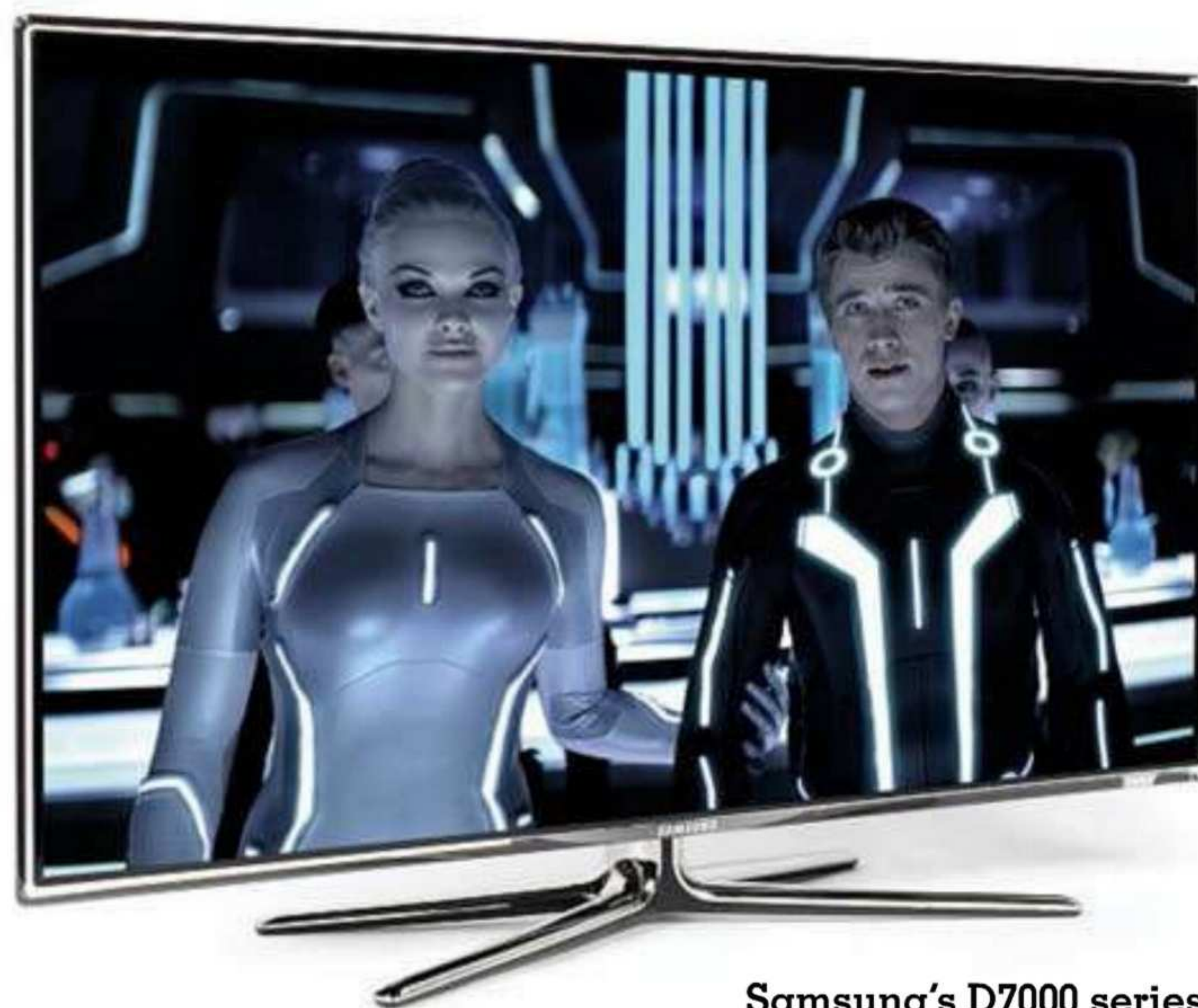
After deciding to replace my Samsung 55C7020, I went for a Samsung 55D7000. I am very happy with it – when watching high quality pictures it's clearly the best TV I have bought. But when watching low-quality pictures I can see a flaw, a slight difference in the brightness. Some areas of the screen look either darker or lighter than the other, giving horizontal lines in the picture. It depends on what you are watching on how noticeable these lines are – but for the price this TV should be flawless.

Neil Taylor, via email

It's not entirely clear from your letter exactly what this brightness flaw looks like, Neil, but we'd suggest that if you think there's a fault, you should take the set back to your retailer – it should have at least a 12-month warranty. We're currently running a D7000 Samsung (40in size) through our Tech Labs and haven't noticed any 'horizontal' brightness shifts.

## Life's too short

Here are my thoughts on the Blu-ray vs streaming debate: If I'm going to spend two hours of my life watching a movie, I want it to be with high quality



Samsung's D7000 series



## Making a media library isn't so tough!

Hi, I read Richard Stevenson's article in *HCC* #195 with interest as I am half way through ripping my collection of 650 DVDs to my very own media server. I think Richard has missed the mark when he complains that the result doesn't 'sound or perform anything like as good as the original discs'. Also his choice of Apple TV may be suspect, too.

When I ripped my own library I made the decision that if the quality was not as good as I was seeing and hearing from my Oppo 983H DVD player then the project was a non-starter. To this end, I eschewed any form of compressed content and used Mac The Ripper to rip every DVD to a folder containing the original VIDEO\_TS folder and its files. If he had chosen to, Richard could have used this program to rip the entire DVD structure, and that would have given him all the extras and the original menu structure from the DVD itself, thus getting neatly around another of his gripes.

Add to this a Mac Mini with HDMI output as the brain of the system, plus two 4TB drives in a RAID1 mirrored arrangement and I was almost all set.

I say 'almost' because, while my Onkyo TX-NR5007 has decent upscaling and deinterlacing via its Reon chipset, I was still not quite getting the quality I was looking for when comparing the result with the Oppo 983H. So my next purchase was the DVDO Edge video processor which uses the same Anchor Bay technology as the Oppo. The Mac Mini was connected to the Edge via HDMI and the Edge to the Onkyo via HDMI. After an hour of tweaking the Edge's settings, the result is that my ripped DVDs are indistinguishable from the originals played through the Oppo. As a bonus, I can also upscale standard definition TV from my Sky box through the Edge too.

The media player I use for the collection is the superb, and free, Plex. This also obviates any need to 'spend time faffing

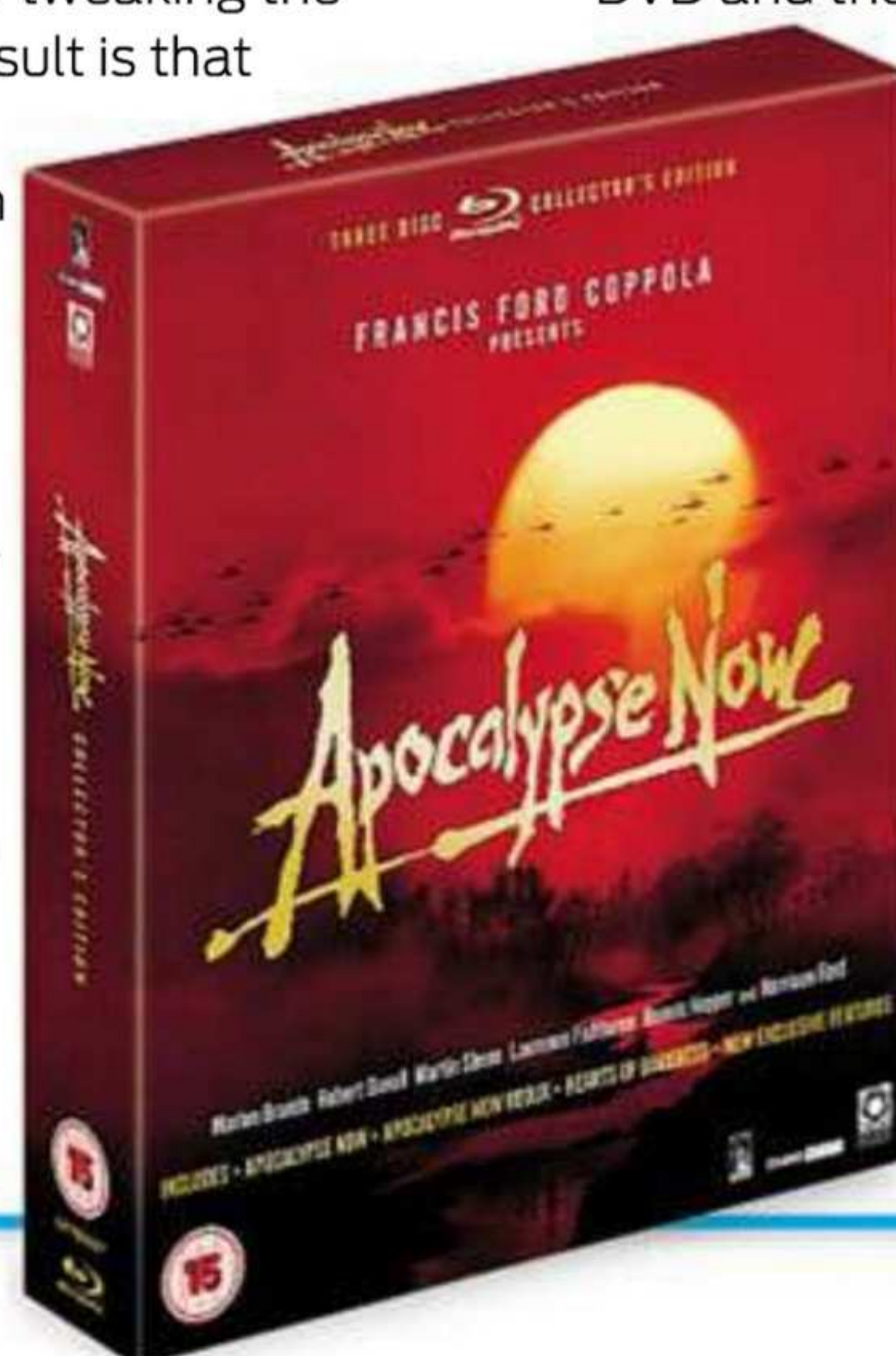
about importing the cover artwork and organising your library' as Plex does this all automatically for you.

The result of all this hard work and money spent is a superb media centre that is driven by the fabulous Plex player. I can browse my collection in a multitude of ways – by name, by genre, by actor, by director etc etc – and I can play any DVD with one click of my Harmony remote. The quality is the same as the original DVD and the convenience and 'wow' factor is unsurpassed.

I have also liberated an entire bookcase for my growing collection of BDs, which I do not intend to rip at this time as the file sizes are simply too big.

One final word, I bought the DVDO Edge from Amazon in the States and saved £200 compared with the UK price, with delivery taking just over a week. Food for thought in these recession-hit times.

Keith, Nottingham





## Sign up to HCC online!

Don't be an Alan Smithee! Joining *Home Cinema Choice's* online community is free, fast and fun

On the home page of [www.homecinemachoice.com](http://www.homecinemachoice.com), scroll down the right-hand side of the page until you see the Login box. Click the *Join Here* button, choose a username and then create your profile. You can upload an image to represent you online and use your signature to tell fellow AV fans about your own system automatically every time you post. Joining the big AV debate online has never been easier!



immersive sound and detailed resolution without artefacts – life's too short to watch poor quality movies. Waiting 10 years until there is finally enough bandwidth for high quality streaming is an unnecessary sacrifice. Thankfully, 10 years may just be enough time for manufacturers to simplify the media PC/player by eliminating system updates, DRM restrictions, security threats, firmware incompatibilities, codec conversions and network/storage conflicts.  
*Ion Mitchell, via email*

**For home cinema enthusiasts, both Blu-ray and streaming/downloading tech have their benefits – the latter is convenient and space-saving, for one thing. But we agree with you about not waiting for the technology to improve. If we all did that, the consumer electronics market would collapse and we'd all be without a hobby!**

### I love my BD deck!

I've been a reader for a good few years now and always find the reviews informative and fair. However, the review of the Samsung BD-C6900 in *HCC* #194 for me cast it in the wrong light.

It makes it sound like the player is slow with internet access, which hasn't been my experience, and while it mentions a flexible USB port, the main benefit, that it can read NTFS drives and files bigger than 4GB, is omitted. The internet access does include apps such as LOVEFiLM, BBC iPlayer, which isn't made obvious. Network video play has been great.

The interface to me is absolutely fine, isn't bound to just a wood effect, and isn't slow to respond in my experience.

In terms of performance, I use it on two-metre projector screen, and am getting what I feel is an excellent picture. I have not experienced video noise and find colours vivid, but realistic. And the upscaling is great, with better colour, detail, and motion than my Toshiba XDE 500.

Last, but not least, the picture appears to be of the wrong player. My 6900 is about half the height, has the lit touch-sensitive controls on top, and is very well built with a windowed



**The BD-C6900:**  
A 3D Blu-ray bargain, if you can live without the Smart Hub portal

disk tray on the top, that can be lit blue briefly when the disk is inserted or ejected. It's a very classy looking machine.

To me this is a great performing player, with some benefits over many others and is made to sound like a bit of an average old clunker, which may put people off. I have owned it for a while and haven't found it lacking in any way. I'm hoping at least some of this might get printed to give the Samsung player a fairer rub of the green, as I want them to get the sales they deserve and, hopefully, knock out more great products like the 6900.

*Ian Lindenstruth, via email*

**Thanks for your comments, Ian. You are absolutely right – that is the wrong picture. We've printed a photo of one of Samsung's 2010 era BD/HDD recorders instead. Apologies – above is a picture of the BD-C6900 [we hope...]**

Moving on to your other points, the BD-C6900 was featured in a roundup of affordable 3D players and was included even though it's reaching the end of its product life, as it can now be snapped up for a bargain price. A more in-depth review originally ran in *HCC* #181.

In terms of the internet features and responsiveness of the UI, our reviewer Jim Hill has obviously spent time with new second-gen 3D players that have improved in these respects over their first-gen predecessors. Samsung's current Smart Hub portal is far superior to the internet@TV feature on the BD-C6900.

We still rate the player highly and are glad you have had the pleasure of owning one. We're sorry you feel we haven't given Samsung a fair 'rub of the green.'

### Ratio rampage

Regarding the delay in John Carpenter's *The Ward*

coming to Blu-ray because it was originally going to be presented at 1.78:1: I was really looking forward to this, but I'll be happier ultimately with a 2.35:1 copy.

Other recently released discs that this happened to were *Buried* (Icon Home Entertainment) and *Bedevilled* (Optimum Home Entertainment). I saw both films on the big screen in 2.35:1 and now on Blu-ray (supposedly for serious cinema enthusiasts) the production companies would rather fill people's television screens than show respect to a director's original intentions. The cinematography in both films cries out for the scope of 2.35:1.

Both production companies should be ashamed for not keeping the original aspect ratio – and I've had to look abroad for better copies. Kudos to Warner Home Video for doing the right thing!

*Anonymous, via email*

Definitely kudos to Warner Home Video, but we must blow The Beek's trumpet here – he's been in regular contact with Warner ever since *The Ward* arrived on a review disc with a 1.78:1 aspect ratio instead of Carpenter's traditional 2.35:1, and while it claimed that it was always going to delay the release and change the ratio, we can't help feeling that his persistent badgering moved things along.

And as for other films with weird aspect ratios – Dario Argento's *The Bird With the Crystal Plumage* is coming out in 2.0:1 – but this is thanks to a change of heart by the director of photography, who's gone off 2.35:1, it seems ●

**Thanks for the advice Keith. We've covered Plex in the magazine before, and agree that it's a nifty piece of software. Maybe Richard should begin building his server empire all over again.**

**We also like the fact that ripping your DVDs to a server has given you more space for your collection of Blu-rays – but we have to ask: have you now thrown the DVDs away? Or are they just on another bookcase elsewhere?**

**Winner:** Star Letter writer Keith wins a copy of *Apocalypse Now: Three Disc Collector's Edition* on Blu-ray courtesy of Optimum Home Entertainment. It's available to buy from June 13, priced at £30 approx. *Apocalypse Now* is also currently in UK cinemas.

Write to Letters, Home Cinema Choice, Future Publishing, 2 Balcombe Street, London NW1 6NW, or email us at [hcc@futurenet.co.uk](mailto:hcc@futurenet.co.uk). Due to the volume of letters we receive we cannot guarantee to print/answer them all.



We've been designing and installing home cinema for over 15 years, and our company has been established for over 60.

You can visit our new showrooms in north London to get a taste of what we can do. Whatever your budget, we can help.

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## AVaficionado

For those in the know...



## High definition universal Blu-ray Disc™ players offering pristine quality video and audio for home entertainment

Modified Oppo BDP-93EU and BDP-95EU units are available from AV Aficionado in multi-region (DVD) and multi-zone/multi-region (Blu-ray/DVD) options. All products are supplied with a two-year warranty.

### Features include:

- Blu-ray 3D
- SACD and DVD-Audio
- Dual HDMI outputs
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### Designed for the Audiophile, the Oppo BDP-95EU also features:

- Dual ES9018 SABRE 32-bit reference DAC (7.1 and dedicated stereo)
- Balanced stereo XLR
- Toroidal transformer



For further details and prices contact AV Aficionado:  
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or buy online at:  
**[www.avaficionado.co.uk](http://www.avaficionado.co.uk)**



# SELECT

→ **Buying Guide** **BEST EVER LCD TV** The top performing LCD screens in the UK  
**HI-DEF PLAYERS** Looking for a Blu-ray deck? We help you choose **PLASMA POWER** Your guide to  
 the ultimate bigscreen TV **ROCKIN' RECEIVERS** The best specs and latest codecs **SUPREME**  
**SPEAKERS** Need a 5.1 package? We name the best! **PLUS** subwoofers, projectors, PVRs & more...



## HCC Ratings key

Officially awesome	1	2	3	4	5
Essential purchase	1	2	3	4	5
Does the job	1	2	3	4	5
Disappointing	1	2	3	4	5
Don't touch it	1	2	3	4	5



102 SELECT

# LCD TV

## Best on test...



**PHILIPS**  
46in → 46PFL9705H  
£2,500 Approx

1 2 3 4 5

Philips' debut 3DTV is worthy of its £2,500 ticket

**Highs:** Excellent 3D and 2D images; solid audio; interactive functions

**Lows:** No Freeview HD tuner

### → Specifications

3D: Yes, active shutter  
Full HD: Yes (to 1080p)  
1920 x 1080 resolution  
No. of HDMI inputs: 4  
No. of Scart inputs: 2 (2 RGB)  
No. of component inputs: 1  
PC input: 1  
Digital tuner: Yes, Freeview

**Tested:** Issue 189  
**For more info visit:**  
[www.philips.co.uk](http://www.philips.co.uk)



**SONY**  
60in → KDL-60LX903  
£3,500 Approx

1 2 3 4 5

Flagship 3D set from Sony is a real bigscreen beauty

**Highs:** Integrated 3D; intuitive GUI; cinematic HD pictures

**Lows:** Weak audio; 2D-3D quality is source-dependent

### → Specifications

3D: Yes, active shutter  
Full HD: Yes (to 1080p)  
1920 x 1080 resolution  
No. of HDMI inputs: 4  
No. of Scart inputs: 1 (RGB)  
No. of component inputs: 1  
PC input: 1  
Digital tuner: Yes, Freeview HD

**Tested:** Issue 186  
**For more info visit:**  
[www.sony.co.uk](http://www.sony.co.uk)



**PHILIPS**  
58in → 58PFL9955H  
£4,000 Approx

1 2 3 4 5

The CinemaScope TV returns with 3D and LED backlighting

**Highs:** Ultra-wide form; 'net connectivity; picture performance

**Lows:** No HD tuner

### → Specifications

3D: Yes, active shutter  
Full HD: Yes (to 1080p)  
2,560 x 1,080 resolution  
No. of HDMI inputs: 4  
No. of Scart inputs: 2 (1 RGB)  
No. of component inputs: 1  
PC input: Via HDMI only  
Digital tuner: Yes, Freeview

**Tested:** Issue 190  
**For more info visit:**  
[www.philips.co.uk](http://www.philips.co.uk)



**LG**  
47in → 47LW550T  
£1,200 Approx

1 2 3 4 5

Passive 3D set performs well and offers excellent value

**Highs:** Seven pairs of 3D spex provided; Smart TV features; fuss-free 3D viewing

**Lows:** Weak 2D-3D conversion

### → Specifications

3D: Yes, passive  
Full HD: Yes (to 1080p)  
1920 x 1080 resolution  
No. of HDMI inputs: 4  
No. of Scart inputs: 1 (RGB)  
No. of component inputs: 1  
PC input: 1  
Digital tuner: Yes, Freeview HD

**Tested:** Issue 194  
**For more info visit:**  
[www.lge.com/uk](http://www.lge.com/uk)



**SONY**  
40in → KDL-40NX713  
£1,000 Approx

1 2 3 4 5

40incher with slick, pixel perfect performance

**Highs:** Outstanding HD picture with exceptional motion picture clarity; integrated Wi-Fi

**Lows:** Limited file support

### → Specifications

3D: Yes, active shutter  
Full HD: Yes (to 1080p)  
1920 x 1080 resolution  
No. of HDMI inputs: 4  
No. of Scart inputs: 1 (RGB)  
No. of component inputs: 1  
PC input: 1  
Digital tuner: Freeview HD

**Tested:** Issue 193  
**For more info visit:**  
[www.sony.co.uk](http://www.sony.co.uk)

## Also recommended...



**TOSHIBA**  
55in → 55WL768  
£1,800 Approx

1 2 3 4 5

Designer 55in 3D screen from Toshiba is worth a look

**Highs:** HD images; Resolution+ upscaling; full-bodied audio; Jacob Jensen styling

**Lows:** Crosstalk with 3D

### → Specifications

3D: Yes, active shutter  
Full HD: Yes (to 1080p)  
1920 x 1080 resolution  
No. of HDMI inputs: 4  
No. of Scart inputs: 1 (RGB)  
No. of component inputs: 2  
PC input: 1  
Digital tuner: Freeview HD

**Tested:** Issue 191  
**For more info visit:**  
[www.toshiba.co.uk](http://www.toshiba.co.uk)



**SAMSUNG**  
46in → LE46C750  
£1,500 Approx

1 2 3 4 5

3D for all. Affordable active shutter set with CCFL backlight

**Highs:** Good 2D performance and effective 2D-3D conversion

**Lows:** Crosstalk problems and narrow viewing angle

### → Specifications

3D: Yes, active shutter  
Full HD: Yes (to 1080p)  
1920 x 1080 resolution  
No. of HDMI inputs: 4  
No. of Scart inputs: 2 (1 RGB)  
No. of component inputs: 1  
PC input: 1  
Digital tuner: Freeview HD

**Tested:** Issue 187  
**For more info visit:**  
[www.samsung.co.uk](http://www.samsung.co.uk)



**PANASONIC**  
42in → TX-L42E30B  
£900 Approx

1 2 3 4 5

Edge-lit LED TV is slightly overpriced, but worth a look

**Highs:** Natural-looking HD pictures; decent audio; healthy selection of features

**Lows:** Advert-laden EPG

### → Specifications

3D: No  
Full HD: Yes (to 1080p)  
1920 x 1080 resolution  
No. of HDMI inputs: 4  
No. of Scart inputs: 1 (RGB)  
No. of component inputs: 1  
PC input: 1  
Digital tuner: Yes, Freeview HD

**Tested:** Issue 194  
**For more info visit:**  
[www.panasonic.co.uk](http://www.panasonic.co.uk)

## Editor's Choice...

**SAMSUNG**  
55in → UE55C9000  
£7,000 Approx

1 2 3 4 5

The 55in Series 9 stands as the crowning glory of Samsung's TV design and technology divisions.

It's an extraordinary product, which warrants its lofty position in the range, and is a great example of just how accomplished an LCD can be – none of Samsung's rivals have a comparable 'statement' product. As a feature-packed set that offers such goodies as 3D, 2D-3D conversion, Internet@TV and media streaming, it represents the leading edge in functionality and the picture quality is exquisite. Once you've seen one in action, you'll want one.

**Tested:** Issue 185  
**For more info visit:** [www.samsung.co.uk](http://www.samsung.co.uk)

### → Specifications

3D: Yes, active shutter  
Full HD: Yes (to 1080p)  
1920 x 1080 resolution  
No. of HDMI inputs: 4  
No. of Scart inputs: 1 (RGB)  
No. of component inputs: 1  
PC input: 1  
Digital tuner: Yes, Freeview HD



# Plasma TV

## Best on test...



**LG**  
50in → 50PX990  
£1,600 Approx

1 2 3 4 5

THX 3D certified plasma with designer looks

**Highs:** Beautifully built; relatively little crosstalk with 3D;  
**Lows:** Image retention issues; black levels could be better

### → Specifications

3D: Yes, active shutter  
Full HD: Yes (up to 1080p)  
1920 x 1080 resolution  
No. of HDMI inputs: 4  
No. of Scart inputs: 1 (RGB)  
Component: 1, PC input: Yes  
Digital tuner: Freeview HD

**Tested:** Issue 192  
**For more info visit:**  
[www.lge.com/uk](http://www.lge.com/uk)



**PANASONIC**  
65in → TX-P65VT20  
£4,500 Approx

1 2 3 4 5

The biggest 3D TV currently available is worth the high ticket

**Highs:** High-impact bigscreen pictures; minimal crosstalk with 3D images  
**Lows:** Sucks electricity

### → Specifications

3D: Yes, active shutter  
Full HD: Yes (up to 1080p)  
1920 x 1080 resolution  
No. of HDMI inputs: 4  
No. of Scart inputs: 2 (RGB)  
Component 1, PC input: Yes  
Digital tuner: Freeview HD and Freesat HD

**Tested:** Issue 186  
**For more info visit:**  
[www.panasonic.co.uk](http://www.panasonic.co.uk)



**PANASONIC**  
50in → TX-P50GT30  
£1,800 Approx

1 2 3 4 5

Second-gen 3D plasma from Panasonic is a videophile's dream

**Highs:** Stunning HD/3D pictures; robust build quality  
**Lows:** No 3D glasses included; 3D pictures lack brightness

### → Specifications

3D: Yes, active shutter  
Full HD: Yes (up to 1080p)  
1920 x 1080 resolution  
No. of HDMI inputs: 4  
No. of Scart inputs: 2 (RGB)  
Component: 1, PC input: Yes  
Digital tuner: Freeview HD and Freesat HD

**Tested:** Issue 195  
**For more info visit:**  
[www.panasonic.co.uk](http://www.panasonic.co.uk)



**PANASONIC**  
50in → TX-P50G20  
£1,500 Approx

1 2 3 4 5

Freeview HD and Freesat HD plasma is the FTA king

**Highs:** Performance; price; Freesat/Freeview HD tuners;  
**Lows:** USB recording mode comes with strings attached

### → Specifications

3D: No  
Full HD: Yes (up to 1080p)  
1920 x 1080 resolution  
No. of HDMI inputs: 4  
No. of Scart inputs: 2 (RGB)  
Component: 1, PC input: Yes  
Digital tuner: Freeview HD and Freesat HD

**Tested:** Issue 182  
**For more info visit:**  
[www.pioneer.co.uk](http://www.pioneer.co.uk)



**SAMSUNG**  
50in → PS50C6900  
£1,300 Approx

1 2 3 4 5

Excellent 50in 3D plasma from the Korean AV kings

**Highs:** Picture performance calibration tools; media functionality; value for money  
**Lows:** Screen is quite reflective

### → Specifications

3D: Yes, active shutter  
Full HD: Yes  
1920 x 1080 resolution  
No. of HDMI inputs: 4  
No. of Scart inputs: 1 (1 RGB)  
Component: 1, PC input: 1  
Digital tuner: Yes, Freeview HD

**Tested:** Issue 191  
**For more info visit:**  
[www.samsung.co.uk](http://www.samsung.co.uk)

## Also recommended...



**LG**  
32in → 32PG6000  
£500 Approx

1 2 3 4 5

World's smallest 32in plasma challenges LCD rivals

**Highs:** Smooth movement; good blacks and connectivity  
**Lows:** Lack of detail; some jagged edges; average audio

### → Specifications

3D: No  
Full HD: No  
1024 x 720 resolution  
No. of HDMI inputs: 4  
No. of Scart inputs: 2 (1 RGB)  
Component: 1, PC input: Yes  
Digital tuner: Freeview

**Tested:** Issue 162  
**For more info visit:**  
[www.lge.com/uk](http://www.lge.com/uk)



**PANASONIC**  
42in → TX-P42G15  
£850 Approx

1 2 3 4 5

Freesat HD NeoPDP at an enticing price

**Highs:** Wide viewing angle; excellent HD pics  
**Lows:** Lacks brightness; three HDMI only

### → Specifications

3D: No  
Full HD: Yes  
1920 x 1080 resolution  
No. of HDMI inputs: 3  
No. of Scart inputs: 2 (2 RGB)  
Component: 1, PC input: Yes  
Digital tuner: Freeview and Freesat HD

**Tested:** Issue 180  
**For more info visit:**  
[www.panasonic.co.uk](http://www.panasonic.co.uk)



**SAMSUNG**  
50in → PS50A556  
£1,000 Approx

1 2 3 4 5

Bargain-priced monster screen with a few caveats

**Highs:** Superb specification; great build quality; sharp detail  
**Lows:** Some motion artefacts and noise visible

### → Specifications

3D: No  
Full HD: Yes (up to 1080p)  
1920 x 1080 resolution  
No. of HDMI inputs: 3  
No. of Scart inputs: 2 (1 RGB)  
Component: 1, PC input: Yes  
Digital tuner: Freeview

**Tested:** Issue 161  
**For more info visit:**  
[www.samsung.co.uk](http://www.samsung.co.uk)

## Editor's Choice...

**PANASONIC**  
50in → TX-P50VT20  
£2,000 Approx

1 2 3 4 5

The arrival of Panasonic's first 3DTV was always going to get the AV juices running, and this 50in plasma doesn't disappoint. 3D Blu-ray material comes over sharp, smooth and crosstalk-free, while Sky's half-resolution 3D preview channel is revelatory, with sports coverage in particular showing excellent depth and detail. Other highlights of this surprisingly affordable 3D set include the two pairs of supplied eyewear, class-leading 2D hi-def picture performance, and savvy networking skills.

**Tested:** Issue 183  
**For more info visit:** [www.panasonic.co.uk](http://www.panasonic.co.uk)

### → Specifications

3D: Yes, active shutter  
Full HD: yes (up to 1080p)  
Native resolution: 1,920 x 1,080  
No. of HDMI inputs: 4  
No. of Scart inputs: 2 (RGB)  
No. of component inputs: 1  
PC input: Yes  
Digital tuner: Freeview HD and Freesat HD





# Blu-ray players

## Best on test...



**DENON**  
Blu-ray → DVD-A1UD  
£4,500 Approx

1 2 3 4 5

Reference universal Blu-ray player that sets new standards

**Highs:** Stunning lifelike picture; genuine hi-fi sound; awesome DVD upscaling

**Lows:** Complex to set up; not for those on a budget!

### → Specifications

3D: No  
Blu-ray profile: 2.0  
Multichannel phono out: Yes (7.1)  
Onboard Dolby TrueHD/DTS-HD MA decoding: Yes/Yes  
Dolby TrueHD/DTS-HD MA bitstream output: Yes/Yes  
DVD-A/SACD playback: Yes/Yes  
Networkability: Ethernet

**Tested:** Issue 178  
**For more info visit:**  
[www.denon.co.uk](http://www.denon.co.uk)



**PHILIPS**  
Blu-ray → BDP7500 MK II  
£200 Approx

1 2 3 4 5

Feature-packed and neatly designed 3D player

**Highs:** Overall picture and sound performance; slick GUI  
**Lows:** Upscaling of DVDs could be better; not lightning quick

### → Specifications

3D: Yes  
Blu-ray profile: 2.0  
Multichannel phono out: Yes (7.1)  
Onboard Dolby TrueHD/DTS-HD MA decoding: Yes/Yes  
Dolby TrueHD/DTS-HD MA bitstream output: Yes/Yes  
DVD-A/SACD playback: No/No  
Networkability: Ethernet; wi-fi via dongle; 2 x USB; Net TV portal

**Tested:** Issue 194  
**For more info visit:**  
[www.philips.co.uk](http://www.philips.co.uk)



**SONY**  
Blu-ray → BDP-S570  
£230 Approx

1 2 3 4 5

3D Blu-ray spinner is packed with features

**Highs:** SACD playback; BBC iPlayer onboard  
**Lows:** No multichannel phono outputs means you'll need a v1.4 AVR for 3D lossless audio

### → Specifications

3D: Yes  
Blu-ray profile: 2.0  
Multichannel phono out: No (stereo only)  
Onboard Dolby TrueHD/DTS-HD MA decoding: Yes/Yes  
Dolby TrueHD/DTS-HD MA bitstream output: Yes/Yes  
DVD-A/SACD playback: Yes/No  
Networkability: Ethernet; wi-fi, USB, iPlayer, LOVEFiLM

**Tested:** Issue 185  
**For more info visit:**  
[www.sony.co.uk](http://www.sony.co.uk)



**OPPO**  
Blu-ray → BDP-83SE  
Nu-Force Edition  
£1,300 Approx

1 2 3 4 5

Buffed-up Oppo BDP-83 is perfect for audiophiles

**Highs:** Excellent HD image quality; terrific build and sonics  
**Lows:** Lacklustre online content portal

### → Specifications

3D: No  
Blu-ray profile: 2.0  
Multichannel phono out: Yes (7.1)  
Onboard Dolby TrueHD/DTS-HD MA decoding: Yes/Yes  
Dolby TrueHD/DTS-HD MA bitstream output: Yes/Yes  
DVD-A/SACD playback: Yes/Yes  
Networkability: Ethernet; online portal; USB

**Tested:** Issue 190  
**For more info visit:**  
[www.hiaudio.co.uk](http://www.hiaudio.co.uk)



**DENON**  
Blu-ray → DBP-1611UD  
£400 Approx

1 2 3 4 5

Affordable universal player with no-nonsense build quality

**Highs:** Exceptional image clarity; decent file support; SACD/DVD-A playback  
**Lows:** Media player suffers from poor navigation

### → Specifications

3D: Yes  
Blu-ray profile: 2.0  
Multichannel phono out: No (stereo only)  
Onboard Dolby TrueHD/DTS-HD MA decoding: Yes/Yes  
Dolby TrueHD/DTS-HD MA bitstream output: Yes/Yes  
DVD-A/SACD playback: Yes/Yes  
Networkability: Ethernet; USB; YouTube

**Tested:** Issue 194  
**For more info visit:**  
[www.denon.co.uk](http://www.denon.co.uk)

## Editor's Choice...

**PANASONIC**  
Blu-ray → DMP-BDT310 → £260 Approx

1 2 3 4 5



This second-generation 3D Blu-ray deck improves on its BDT300 predecessor thanks to some new features and a more wallet-friendly asking price. Standout features – alongside the typically excellent 2D and 3D playback – are Skype functionality, 2D-3D conversion, access to Panasonic's Viera Connect online portal, faster loading times and a revamped GUI that takes usability to the next level. The new-look fascia and motion-sensitive controls add even more to the Panasonic party. Without doubt the current best budget choice for 3D Blu-ray.

**Tested:** Issue 194  
**For more info visit:** [www.panasonic.co.uk](http://www.panasonic.co.uk)

### → Specifications

3D: Yes, plus 2D conversion  
Blu-ray profile: 2.0  
DVD upscaling: Up to 1080p  
Multichannel phono out: No (stereo only)  
Onboard Dolby TrueHD/DTS-HD MA decoding: Yes/Yes  
Dolby TrueHD/DTS-HD MA bitstream output: Yes/Yes  
DVD-A/SACD playback: No/No  
Networkability: Ethernet; Wi-Fi; 2 x USB; Viera Connect portal; Skype functionality; twin HDMI outputs

## Also recommended



**ARCAM**  
Blu-ray → BDP100  
£1,300 Approx

1 2 3 4 5

Debut deck from Arcam offers few features but a solid BD/CD experience

**Highs:** Classy Blu-ray/DVD and CD quality; superb build  
**Lows:** No online content or media streaming

### → Specifications

3D: No  
Blu-ray profile: 2.0  
Multichannel phono out: No (stereo only, two zones)  
Onboard Dolby TrueHD/DTS-HD MA decoding: Yes/Yes  
Dolby TrueHD/DTS-HD MA bitstream output: Yes/Yes  
DVD-A/SACD playback: No/No  
Networkability: Ethernet; USB

**Tested:** Issue 194  
**For more info visit:**  
[www.arcam.co.uk](http://www.arcam.co.uk)



**SAMSUNG**  
Blu-ray → BD-D6900  
£300 Approx

1 2 3 4 5

Curious 3D BD/Freeview HD receiver hybrid

**Highs:** Good 2D-3D conversion; Smart Hub portal access; recording to USB  
**Lows:** Average DVD upscaling; hit-and-miss streaming

### → Specifications

3D: Yes, plus 2D conversion  
Blu-ray profile: 2.0  
Multichannel phono out: No (stereo only)  
Onboard Dolby TrueHD/DTS-HD MA decoding: Yes/Yes  
Dolby TrueHD/DTS-HD MA bitstream output: Yes/Yes  
DVD-A/SACD playback: No/No  
Networkability: Ethernet; wi-fi; USB; Smart Hub portal

**Tested:** Issue 195  
**For more info visit:**  
[www.samsung.co.uk](http://www.samsung.co.uk)



**CAMBRIDGE AUDIO**  
Blu-ray → Azur 650BD  
£400 Approx

1 2 3 4 5

First deck from UK brand is a solid performer – and multiregion DVD, too

**Highs:** Bulletproof build; excellent AV performance  
**Lows:** No 'net features

### → Specifications

3D: No  
Blu-ray profile: 2.0  
Multichannel phono out: Yes (7.1)  
Onboard Dolby TrueHD/DTS-HD MA decoding: Yes/Yes  
Dolby TrueHD/DTS-HD MA bitstream output: Yes/Yes  
DVD-A/SACD playback: Yes/Yes  
Networkability: Ethernet for BD-Live; 2 x USB

**Tested:** Issue 184  
**For more info visit:**  
[www.cambridgeaudio.com](http://www.cambridgeaudio.com)



# Recorders

## Best on test...



**PHILIPS**  
Freeview HD PVR →  
HDT 8520  
£250 Approx



Sets a high standard for user-friendliness

**Highs:** Good quality HD and SD pics; cutting-edge looks

**Lows:** No multimedia functions; EPG can be frustrating

### → Specifications

HDD size: 500GB  
Twin tuners: Yes,  
Freeview HD  
HDMI: Yes, with  
1080p upscaling  
Component output: No

**Tested:** Issue 185  
**For more info visit:**  
[www.philips.co.uk](http://www.philips.co.uk)



**HUMAX**  
Freeview HD PVR →  
HDR-FOX T2  
£330 Approx



The pick of the new Freeview HD PVRs so far

**Highs:** Joy to use; multimedia talent; great performance

**Lows:** Cramped remote control; can't trim recordings

### → Specifications

HDD size: 500GB  
Twin tuners: Yes,  
Freeview HD  
HDMI: Yes, with  
1080p upscaling  
Component output: No

**Tested:** Issue 187  
**For more info visit:**  
[www.humaxdigital.com/uk](http://www.humaxdigital.com/uk)



**TECHNISAT**  
Freeview HD PVR → HDFV  
£150 Approx



Affordable Freeview HD PVR with external USB recording

**Highs:** Quality HD and upscaled SD performance; friendly user interface

**Lows:** USB files can't be played back elsewhere; single tuner

### → Specifications

HDD size: N/A – records to USB  
Twin tuners: No, single  
Freeview HD tuner  
HDMI: Yes, with 1080p upscaling  
Component output: No

**Tested:** Issue 188  
**For more info visit:**  
[www.technisat.co.uk](http://www.technisat.co.uk)



**SAMSUNG**  
Freeview HD PVR/BD →  
BD-D8500  
£380 Approx



3D Blu-ray player with 500GB Freeview HD PVR

**Highs:** Abundant features; Smart Hub portal and network features; plays discs too!

**Lows:** Can't record two channels

### → Specifications

HDD size: 500GB  
Twin tuners: Yes,  
Freeview HD  
HDMI: Yes, with 1080p upscaling  
Component output: No

**Tested:** Issue 194  
**For more info visit:**  
[www.samsung.co.uk](http://www.samsung.co.uk)



**GRUNDIG**  
Freesat PVR →  
GUFSDTR500HD  
£280 Approx



Dual-tuner Freesat+ PVR with capacious 500GB HDD

**Highs:** Easy to use; cool-running; efficient upscaling of non-HD channels

**Lows:** USB port is disabled

### → Specifications

HDD size: 500GB  
Twin tuners: Yes, Freesat HD  
HDMI: Yes  
Component output: No

**Tested:** Issue 182  
**For more info visit:**  
[www.grundig.co.uk](http://www.grundig.co.uk)

## Also recommended



**TVONICS**  
PVR → DTR-HD500  
£250 Approx



Stylish 500GB twin tuner Freeview+ HD PVR

**Highs:** Commendable picture quality; neat design; twin HDMI inputs

**Lows:** USB ports are for JPEG display and service updates only

### → Specifications

HDD size: 500GB  
Twin tuners: Yes, Freeview HD  
HDMI: Yes, 2-in, 1-out with 1080p upscaling  
Component output: No

**Tested:** Issue 191  
**For more info visit:**  
[www.tvonics.com](http://www.tvonics.com)



**PANASONIC**  
DVDR → DMR-EX773  
£300 Approx



DVD/HDD recorder that misses out on Freeview HD

**Highs:** Solid AV performance; heaps of features and recording flexibility

**Lows:** No infra-red control over STB; single Freeview tuner only

### → Specifications

HDD size: 160GB  
Twin tuners: No, single digital only  
HDMI: Yes  
Component output: Yes  
Camcorder input: No – USB/SD via USB instead  
Format: -R/RW, +R/RW, -RAM  
Dual-layer recording: Yes

**Tested:** Issue 182  
**For more info visit:**  
[www.panasonic.co.uk](http://www.panasonic.co.uk)



**3VIEW**  
Freeview HD PVR →  
3VHD  
£300 Approx



Feature-packed DVB-T2 PVR/media player hybrid

**Highs:** Online functionality; media player/server;

**Lows:** No digital teletext or integrated wi-fi

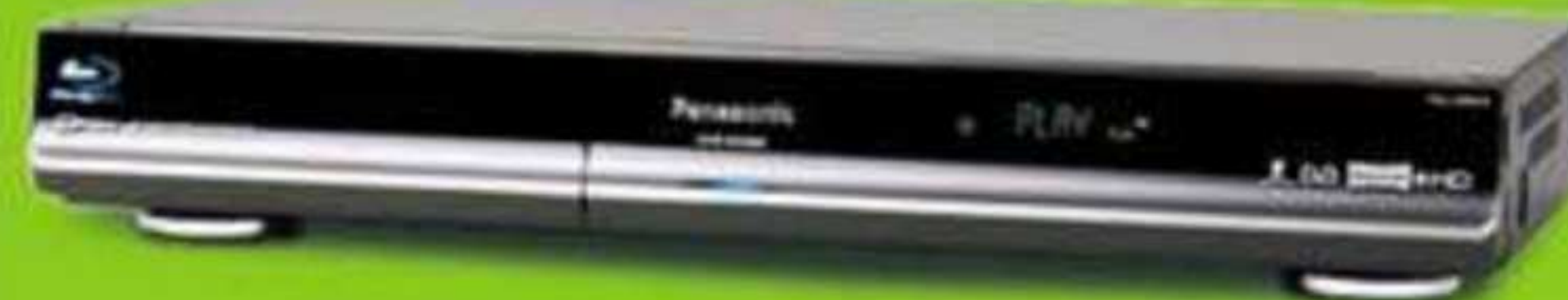
### → Specifications

HDD size: 500GB  
Twin tuners: Yes,  
DVB-T2 (not Freeview certified as there is no 'red button' support)  
HDMI: Yes, with 1080p upscaling  
Component output: No

**Tested:** Issue 193  
**For more info visit:**  
[www.3view.com](http://www.3view.com)

## Editor's Choice...

**PANASONIC**  
DVD/BDR → DMR-BW880 → £800 Approx



Panasonic has followed last year's award-winning twin Freesat HD/Blu-ray recorder with this Freeview HD model. Again sporting a 500GB HDD, Profile 2.0 Blu-ray player/recorder and Viera Cast online interactivity, this deck solidifies Panasonic's status as the kings of convergence. Blu-ray playback is first-rate, and as a PVR the BW880 is unique in its flexibility. Other goodies, including Gracenote compatibility, DLNA certification, DV, SD and USB inputs add to its appeal. Not cheap, but true quality often isn't.

**Tested:** Issue 186  
**For more info visit:** [www.panasonic.co.uk](http://www.panasonic.co.uk)

### → Specifications

Hard disk: 500GB  
Twin Tuners: Yes 2 x Freeview HD  
Component output: No  
Format: BD-RE, BD-R, DVD-R/RW, +R/RW, -RAM  
Dual-layer recording: Yes



# AV receivers

## Best on test...



**ONKYO**  
AVR → TX-SR609  
£500 Approx

1 2 3 4 5

Affordable 7.2-channel AVR with Spotify and 4K scaler

**Highs:** Overflowing with features; revamped design; involving audio performance  
**Lows:** Doesn't like being driven too hard

### → Specifications

Power: 7 x 160W (6Ω)  
Upscaling via HDMI: Yes  
Tuner: Yes (AM/FM/net)  
Dolby TrueHD: Yes  
DTS-HD: Yes  
Zone 2: Yes  
Serial port control: No  
THX certification: No  
Select2 Plus  
Component input: 2  
HDMI: 6-in, 1-out (v1.4a)  
Multichannel input: No

**Tested:** Issue 195  
**For more info visit:**  
[www.eu.onkyo.com](http://www.eu.onkyo.com)



**ANTHEM**  
AVR → MRX 700  
£2,100 Approx

1 2 3 4 5

Sonically superior AVR that misses out on a few features

**Highs:** Fantastically engaging sound; excellent auto EQ system; brooding design  
**Lows:** Only four HDMI inputs; setup not for the faint-hearted

### → Specifications

Power: 7 x 120W (8Ω)  
Upscaling via HDMI: Yes  
Tuner: Yes (AM/FM)  
Dolby TrueHD: Yes  
DTS-HD: Yes  
Zone 2: Yes  
Serial port control: Yes  
THX certification: No  
Component input: 3  
HDMI: 4-in, 1-out (v1.4)  
Multichannel input: Yes (7.1)

**Tested:** Issue 195  
**For more info visit:**  
[www.anthemavs.co.uk](http://www.anthemavs.co.uk)



**ONKYO**  
AVR → TX-NR5008  
£2,400 Approx

1 2 3 4 5

New flagship receiver exhibits a smoother, mellower sound

**Highs:** Extensive codec support; ample connectivity, power on tap; network audio  
**Lows:** Navigation could be more intuitive

### → Specifications

Power: 9 x 140W (6Ω)  
Upscaling via HDMI: Yes  
Tuner: Yes (AM/FM/net)  
Dolby TrueHD: Yes  
DTS-HD: Yes  
Zone 2: Yes, and 3  
Serial port control: Yes  
THX certification: Ultra 2 Plus  
Component input: 3  
HDMI: 8-in, 2-out (v1.4a)  
Multichannel input: Yes (7.1)

**Tested:** Issue 191  
**For more info visit:**  
[www.eu.onkyo.com](http://www.eu.onkyo.com)



**ARCAM**  
AVR → AVR400  
£1,700 Approx

1 2 3 4 5

Delicious-sounding Class A/B receiver will please audiophiles

**Highs:** Power output exceeds Arcam's own claims; sumptuous design and build  
**Lows:** Lack of HDMI connections may hinder setup

### → Specifications

Power: 7 x 90W (8Ω)  
Upscaling via HDMI: Yes  
Tuner: Yes (FM/AM/net/DAB)  
Dolby TrueHD  
DTS-HD: Yes  
Zone 2: Yes  
Serial port control: Yes  
THX certification: No  
Component input: 3  
HDMI: 5-in, 1-out (v1.4a)  
Multichannel input: Yes (7.1)

**Tested:** Issue 194  
**For more info visit:**  
[www.arcam.co.uk](http://www.arcam.co.uk)



**PIONEER**  
AVR → SC-LX83  
£2,000 Approx

1 2 3 4 5

Pioneer's top-flight AVR mixes power, control and usability

**Highs:** Punchy, detailed, expansive sound; iControl app is superb; MCACC setup; RF remote handset  
**Lows:** Seven-channel only

### → Specifications

Power: 7 x 190W (8Ω)  
Upscaling via HDMI: Yes  
Tuner: Yes (AM/FM)  
Dolby TrueHD: Yes  
DTS-HD: Yes  
Zone 2: Yes, and 3  
Serial port control: Yes  
THX certification: Yes, Ultra2 Plus  
Component input: 3  
HDMI: 6-in, 2-out  
Multichannel input: Yes (7.1)

**Tested:** Issue 186  
**For more info visit:**  
[www.pioneer.co.uk](http://www.pioneer.co.uk)

## Editor's Choice...

**DENON**  
AVR → AVR-4311  
£2,000 Approx

1 2 3 4 5

With no 2011 successor to the AVR-4810, the 4311 takes the mantle of Denon's flagship receiver. It's no surprise, then, that it's a storming home cinema product. Its nine onboard amplifiers pack enough grunt to drive a serious speaker system, and it can run an 11-channel array with the help of a stereo amplifier. Performance, after Audyssey calibration, is glorious, and this is matched by a smart feature set – particularly Apple AirPlay, which will make you rethink your MP3 collection.

**Tested:** Issue 193  
**For more info visit:** [www.denon.co.uk](http://www.denon.co.uk)

### → Specifications

Power: 9 x 170W (6Ω)  
Upscaling to HDMI: Yes  
Tuner: AM/FM/Net  
Dolby TrueHD/DTS-HD: Yes/Yes  
Zone 2: Yes and 3 & 4  
Serial port control: Yes  
THX certification: No  
Component input: 3  
HDMI: 6-in, 2-out (v1.4)  
Multichannel input: Yes (7.1)



## Also recommended...



**MARANTZ**  
AVR → SR7005  
£1,400 Approx

1 2 3 4 5

Marantz finally shakes off its 2-channel bias with this stonking multichannel marvel

**Highs:** Effortlessly achieves superb detail; great value  
**Lows:** Lacks 9-ch output; not THX rated; tricky to set LFE

### → Specifications

Power: 7 x 125W (8Ω)  
Upscaling via HDMI: Yes  
Tuner: Yes (AM/FM/net)  
Dolby TrueHD: Yes  
DTS-HD: Yes  
Zone 2: Yes  
Serial port control: Yes  
THX certification: No  
Component input: 4  
HDMI: 6-in, 2-out (v1.4a)  
Multichannel input: Yes (7.1)

**Tested:** Issue 187  
**For more info visit:**  
[www.marantz.co.uk](http://www.marantz.co.uk)



**DENON**  
AVR → AVR-2311  
£800 Approx

1 2 3 4 5

Mid-range Denon sounds good but is feature-lite

**Highs:** Articulate, fast-paced sound; digital iPod/iPad connection  
**Lows:** Lack of networking is odd; no multichannel inputs

### → Specifications

Power: 7 x 135W (8Ω)  
Upscaling via HDMI: Yes  
Tuner: Yes (AM/FM)  
Dolby TrueHD  
DTS-HD: Yes  
Zone 2: Yes  
Serial port control: Yes  
THX certification: No  
Component input: 2  
HDMI: 6-in, 1-out (v1.4)  
Multichannel input: No

**Tested:** Issue 190  
**For more info visit:**  
[www.denon.co.uk](http://www.denon.co.uk)



**PIONEER**  
AVR → VSX-520  
£300 Approx

1 2 3 4 5

Affordable but stylish 3D-capable AVR

**Highs:** Classy design; decent sound quality; good feature count  
**Lows:** Springclip speaker terminals; no OSD

### → Specifications

Power: 5 x 130W (8Ω)  
Upscaling via HDMI: Yes  
Tuner: Yes (AM/FM)  
Dolby TrueHD: Yes  
DTS-HD: Yes  
Zone 2: No  
Serial port control: No  
THX certification: No  
Component input: 2  
HDMI: 3-in, 1-out (v1.4)  
Multichannel input: No

**Tested:** Issue 191  
**For more info visit:**  
[www.pioneer.co.uk](http://www.pioneer.co.uk)



# Projectors

## Best on test...



**JVC**  
D-ILA → DLA-X7  
£6,500 Approx



Step up 3D D-ILA model for serious systems

**Highs:** Plenty of setup and calibration flexibility; first-rate visuals; quiet in operation

**Lows:** Slightly tricky colour management; minor crosstalk

### → Specifications

1920 x 1080 resolution  
HDMI inputs: 2  
Component inputs: 1  
D-Sub: Yes  
Brightness (claimed): 1,300 ANSI Lumens  
Contrast (claimed): 70,000:1  
Lamp life (claimed): 3,000hrs  
Fan noise: 20dB  
24fps: Yes

**Tested:** Issue 195  
**For more info visit:**  
[www.jvc.co.uk](http://www.jvc.co.uk)



**SIM2**  
DLP → MICO 40  
£11,00 Approx



SIM2's 'affordable' LED projector claims a 30,000-hour lamp life

**Highs:** Richly coloured, sharp pictures; nicely designed chassis; enormous setup flexibility

**Lows:** Bland remote and OS

### → Specifications

1920 x 1080 resolution  
HDMI inputs: 2  
Component inputs: 1  
D-Sub: Yes  
Brightness (claimed): 700 ANSI lumens  
Contrast (claimed): 50,000:1  
Lamp life (claimed): 30,000hrs  
Fan noise: 25dB  
24fps: Yes

**Tested:** Issue 189  
**For more info visit:**  
[www.sim2.co.uk](http://www.sim2.co.uk)



**RUNCO**  
DLP → LS-5  
£7,500 Approx



High-end CI projection for the mass market

**Highs:** Excellent contrast and colour response; superbly sharp images; minimal rainbow effect

**Lows:** Noisy runner

### → Specifications

1920 x 1080 resolution  
HDMI inputs: 2  
Component inputs: 2  
D-Sub: Yes  
Brightness (claimed): 800 ANSI lumens  
Contrast (claimed): 15,000:1  
Lamp life (claimed): 2,000 to 4,000hrs  
Fan noise: 30dB  
24fps: Yes

**Tested:** Issue 187  
**For more info visit:**  
[www.pulsemarketing.org](http://www.pulsemarketing.org)



**JVC**  
D-ILA → DLA-X3  
£3,600 Approx



Good value video-chucker does 3D, too

**Highs:** Gorgeous 2D performance; versatile picture controls; low operational noise;

**Lows:** No THX preset; crosstalk with 3D pictures

### → Specifications

1920 x 1080 resolution  
HDMI inputs: 2  
Component inputs: 1  
D-Sub: Yes  
Brightness (claimed): 1,300 ANSI lumens  
Contrast (claimed): 50,000:1  
Lamp life (claimed): 3,000hrs  
Fan noise: 20dB  
24fps: Yes

**Tested:** Issue 193  
**For more info visit:**  
[www.jvc.co.uk](http://www.jvc.co.uk)



**SONY**  
SXRD → VPL-HW20  
£2,400 Approx



New mid-range model from Sony delivers the goods

**Highs:** Design; excellent picture quality; good value

**Lows:** Adjustment tools aren't standard; no 12V trigger

### → Specifications

1920 x 1080 resolution  
HDMI inputs: 2  
Component inputs: 1  
D-Sub: Yes  
Brightness (claimed): 1,300 ANSI lumens  
Contrast (claimed): 80,000:1  
Lamp life (claimed): 6,000hrs  
Fan noise: 20dB  
24fps: Yes

**Tested:** Issue 190  
**For more info visit:**  
[www.sony.co.uk](http://www.sony.co.uk)

## Also recommended...



**EPSON**  
LCD → EH-TW5500  
£4,000 Approx



Epson's flagship home cinema projector does LCD proud

**Highs:** Lots of features; easy and flexible to setup; produces the finest LCD pictures yet

**Lows:** More expensive than rivals; can lose focus a little

### → Specifications

1920 x 1080 resolution  
HDMI inputs: 2  
Component inputs: 1  
D-Sub: Yes  
Brightness (claimed): 1,600 ANSI Lumens  
Contrast (claimed): 200,000:1  
Lamp life (claimed): 4,000hrs  
Fan noise: 22dB  
24fps: Yes

**Tested:** Issue 181  
**For more info visit:**  
[www.epson.co.uk](http://www.epson.co.uk)



**VIVITEK**  
DLP → H1085  
£1,000 Approx



A brilliant full HD projector at a mouth-watering price

**Highs:** Rich colours; excellent image tweaks; 12V trigger

**Lows:** Noisy runner in high brightness mode; some low-level noise in darker scenes

### → Specifications

1920 x 1080 resolution  
HDMI inputs: 2  
Component inputs: 1  
D-Sub: Yes  
Brightness (claimed): 2,000 ANSI lumens  
Contrast (claimed): 5,000:1  
Lamp life (claimed): 4,000hrs  
Fan noise: 26dB  
24fps: Yes

**Tested:** Issue 179  
**For more info visit:**  
[www.vivitekcorp.com](http://www.vivitekcorp.com)



**PANASONIC**  
LCD → PT-AE4000  
£2,500 Approx



Updated flagship PJ adds red-rich lamp and 12V trigger

**Highs:** Smooth filmic pictures; easy to setup and use; handy feature set

**Lows:** Boxy design; be careful with high frame-rate settings

### → Specifications

1920 x 1080 resolution  
HDMI inputs: 2  
Component inputs: 1  
D-Sub: Yes  
Brightness (claimed): 1,600 ANSI lumens  
Contrast (claimed): 100,000:1  
Lamp life (claimed): 2,000 hours  
Fan noise: 22dB  
24fps: Yes

**Tested:** Issue 177  
**For more info visit:**  
[www.panasonic.co.uk](http://www.panasonic.co.uk)

## Editor's Choice...

**SONY**  
SXRD → VPL-VW90ES  
£5,400 Approx



Sony's new range-topping projector marries an exemplary 2D picture performance with one of the best Active Shutter 3D systems we've seen – extensive user features allow you to pretty much eliminate crosstalk niggles with three-dimensional images. Aside from its video prowess, it also features a smart design and solid build quality, inoffensive running noise and versatile installation options, including zoom focus and electronic lens shift. The best 3D projector we've seen so far – JVC and chums will have to do well to beat it.

**Tested:** Issue 192  
**For more info visit:** [www.sony.co.uk/biz](http://www.sony.co.uk/biz)

### → Specifications

1920 x 1080 resolution  
HDMI inputs: 2  
Component inputs: 1  
D-Sub: Yes  
Brightness (claimed): 1,000 ANSI lumens  
Contrast (claimed): 150,000:1  
Lamp life (claimed): NA  
Fan noise: 22dB  
24fps: Yes



# Speaker systems

## Best on test...



**MONITOR AUDIO**  
5.1 → Platinum PL200AV  
£11,500 Approx

1 2 3 4 5

Gorgeous-looking, hi-tech 5.1 system for serious cinema

**Highs:** Dynamic, engaging sound with pin-sharp detail; taut, powerful bass; excellent build

**Lows:** Base plinths seem to belong to another design

### → Specifications

Power handling: 2 x 250W, 2 x 120W, 1 x 100W  
Rears: Direct radiating  
Subwoofer: 1 x 1,000W  
Finish: Gloss; Bookshelf: No

**Tested:** Issue 184

**For more info visit:**  
[www.monitoraudio.com](http://www.monitoraudio.com)



**XTZ**  
5.1 → 99 Series  
£2,200 Approx

1 2 3 4 5

Potent floorstanding system with serious driver tech

**Highs:** Solid build quality; detailed, expansive sound; lots of adjustability

**Lows:** Possibly confusing for the timid technophobe; mail order only

### → Specifications

Power handling: 2 x 550W, 3 x 100W  
Rears: Direct radiating  
Subwoofer: 300W  
Finish: Gloss; Bookshelf: No

**Tested:** Issue 193

**For more info visit:**  
[www.audiosanctum.co.uk](http://www.audiosanctum.co.uk)



**ACOUSTIC ENERGY**  
5.1 → Aegis Neo V2  
£1,200 Approx

1 2 3 4 5

Traditional-looking 5.1 system does the job

**Highs:** Classy build; sophisticated sound with clean bass tones

**Lows:** At high volumes there's some slight distortion from the floorstanders

### → Specifications

Power handling: 2 x 170W, 3 x 120W  
Rears: Direct radiating  
Subwoofer: 200W  
Finish: Wood; Bookshelf: No

**Tested:** Issue 191

**For more info visit:**  
[www.acoustic-energy.co.uk](http://www.acoustic-energy.co.uk)



**CANTON**  
5.1 → Vento 800 Series  
£6,600 Approx

1 2 3 4 5

High-performance floorstanding array from Germany's no.1 speaker brand

**Highs:** Articulate centre channel; powerful subwoofer; beautiful design

**Lows:** Might make you want to upgrade your AVR...

### → Specifications

Power handling: 2 x 200W, 3 x 150W  
Rears: Direct radiating  
Subwoofer: 500W  
Finish: Wood; Bookshelf: No

**Tested:** Issue 194

**For more info visit:**  
[www.canton.de](http://www.canton.de)



**KEF**  
5.1 → T-Series T205  
£1,500 Approx

1 2 3 4 5

Slim and sultry 5.1 system looks gorgeous and offers sweet surround sonics

**Highs:** Tight, fast subwoofer and potent, clean-sounding satellites; neat design; wall- and stand-mounting options

**Lows:** Not for stereophiles or largescale rooms

### → Specifications

Power handling: 2 x 100W, 3 x 150W  
Rears: Direct radiating  
Subwoofer: 250W  
Finish: Gloss; Bookshelf: No

**Tested:** Issue 192

**For more info visit:**  
[www.kef.com](http://www.kef.com)

## Also recommended...



**EMP TEK**  
7.1 → Impression  
£4,000 Approx

1 2 3 4 5

Full-fat 7.1 array from new-to-the-UK American brand

**Highs:** Thrilling, large-scale sound; sweet HF reproduction and forthright midrange; sumptuous build and finish

**Lows:** Other systems offer greater bass depth and musical fidelity

### → Specifications

Power handling: 4 x 200W, 2 x 100W, 1 x 120W  
Rears: Direct radiating  
Subwoofer: 100W  
Finish: Gloss; Bookshelf: No

**Tested:** Issue 193

**For more info visit:**  
[www.aldoussystems.com](http://www.aldoussystems.com)



**MONITOR AUDIO**  
5.1 → Apex  
£2,400 Approx

1 2 3 4 5

Premium compact 5.1 system offers performance and style

**Highs:** Intricately detailed, articulate and powerful sound; supermodel looks; build quality

**Lows:** Expensive by normal compact system standards

### → Specifications

Power handling: 4 x 100, 1 x 200W;  
Rears: Direct radiating  
Subwoofer: 500W  
Finish: Gloss; Bookshelf: Yes

**Tested:** Issue 190

**For more info visit:**  
[www.monitoraudio.co.uk](http://www.monitoraudio.co.uk)



**JAMO**  
5.1 → D500  
£1,700 Approx

1 2 3 4 5

Value-for-money THX Select2 system for your cinema room

**Highs:** Good build quality; keen price; THX sound is packed with definition and placement

**Lows:** Wall-mounting brackets could be improved; uninspiring to look at

### → Specifications

Power handling: 3 x 150W, 2 x 120W;  
Rears: Dipoles  
Subwoofer: 650W  
Finish: Gloss; Bookshelf: No

**Tested:** Issue 193

**For more info visit:**  
[www.jamo.com](http://www.jamo.com)

## Editor's Choice...

**PSB**  
5.1 → Imagine Series  
£3,000 Approx

1 2 3 4 5

Canadian brand PSB may not be a household name in the UK but with systems like this mid-range marvel we hope that changes. This 5.1 Imagine Series array offers an astonishing performance for its £3,000 price tag – the Ferrofluid-cooled tweeters work in tandem with mid-range drivers and the 500W subwoofer to create an immersive, potent soundfield with both movies and music. Build quality is superb, and the curved edge design is pure class.

**Tested:** Issue 188

**For more info visit:** [www.armorhome.co.uk](http://www.armorhome.co.uk)

### → Specifications

Power handling: 2 x 200W, 3 x 150W  
Rears: Direct radiating  
Subwoofer: 500W  
Finish: Wood  
Bookshelf: No



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# Subwoofers

## Best on test...



**PARADIGM**  
SW → Seismic 110  
£1,200 Approx

1 2 3 4 5

Powerful, high-performance 10in sub with quirky styling

**Highs:** Excellent performance from a compact sub; monstrous power  
**Lows:** Not a budget option

### → Specifications

Frequency response: 18Hz-150Hz (claimed)  
Amplifier: 850W  
Driver: 10in  
Weight: 16.8kg  
Enclosure: Sealed  
On-board equaliser: No  
Remote control: No

**Tested:** Issue 188  
**For more info visit:**  
[www.paradigm.com](http://www.paradigm.com)



**VELODYNE**  
SW → CHT-15Q  
£1,200 Approx

1 2 3 4 5

Potent 15in woofer with excellent EQ system

**Highs:** Tremendous grip, power, and headroom; supplied remote control  
**Lows:** Pretty dull to look at

### → Specifications

Frequency response: 23Hz-120Hz (claimed)  
Amplifier: 750W  
Driver: 15in  
Weight: 34kg  
Enclosure: Ported  
On-board equaliser: Yes  
Remote control: Yes

**Tested:** Issue 189  
**For more info visit:**  
[www.red-line.co.uk](http://www.red-line.co.uk)



**PARADIGM**  
SW → Signature Sub 2  
£7,250 Approx

1 2 3 4 5

Reference grade sub for serious installs only

**Highs:** Astonishing power, control and speed; build quality is first rate  
**Lows:** Can you afford one?

### → Specifications

Frequency response: 7Hz-150Hz (claimed)  
Amplifier: 4,500W  
Driver: 6 x 10in  
Weight: 105.7kg  
Enclosure: Sealed  
On-board equaliser: No  
Remote control: No

**Tested:** Issue 183  
**For more info visit:**  
[www.paradigm.com](http://www.paradigm.com)



**BK ELECTRONICS**  
SW → XXLS400DF  
£400 Approx

1 2 3 4 5

Another excellent affordable sub from the Brit-based brand

**Highs:** Clean, tight output with 'warm' feel from its Class AB amplification;  
**Lows:** Black box design

### → Specifications

Frequency response: 19Hz-120Hz (claimed)  
Amplifier: 400W  
Driver: 12in  
Weight: 29kg  
Enclosure: Sealed  
On-board equaliser: No  
Remote control: No

**Tested:** Issue 191  
**For more info visit:**  
[www.bekelec.com](http://www.bekelec.com)



**POLK AUDIO**  
DSW → MicroPRO 2000  
£1,200 Approx

1 2 3 4 5

Premium-level small-scale subwoofer

**Highs:** Superb performance from such a small unit; automatic RoomEQ  
**Lows:** Expensive for an 8in

### → Specifications

Frequency response: 22-200Hz (claimed)  
Amplifier: 1,200W  
Driver: 8in Weight: 15.4kg  
Enclosure: Sealed, with passive radiator  
On-board equaliser: No  
Remote control: Yes

**Tested:** Issue 186  
**For more info visit:**  
[www.polkaudio.com](http://www.polkaudio.com)

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#197 ON SALE  
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## World's best TV?

Does Panasonic's new top-of-the-range 55in VT30 plasma TV live up to the hype?



### → Next issue

**SONY** EX52 Bravia LED TV **TANNOY** Flagship 5.1 system **OPPO** Multi-region BD spinner **SAMSUNG** Home theatre system **BENQ** Affordable full HD PJ **DUNE** HD Blu-ray based media player **PANASONIC** 3D Blu-ray recorder **WORLD EXCLUSIVE** Meridian's 4K upscaling projector tried and tested **PLUS:** In-depth news, BD reviews and more

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# Aavara HDMI cables

from **£19.99**

## Aavara High Definition HDMI Cables

These are top specification Hi-Definition AV Cables fully supporting all of the latest HDMI specifications, including: 3D, 4K, ARC (Audio Return Channel), HEC (HDMI Ethernet Channel). The construction features pure gold 24K plated end shell and connector with a protective braided cable sheath.

### Product Features

- Works with PS3, XBOX, Blu-Ray/HD/DVD player, Set Top Box
- 1.2Gbps Ultra Wide bandwidth enable brilliant 1080p HD content and 8 channel Audio
- Exclusively Superior Diamond cutting design and stylish yellow webbing lines
- HDMI to DVI interoperability allows easy interconnectivity
- Support Dolby True HD and DTS-HD Master Audio Transmission
- Support x.v. Colour Wide Gamut and 16bit Deep Colour Video Transmission

Code HDAV2 2m version **£19.99**  
Code HDAV3 3m version **£24.99**



## Aavara Hi-Definition Pro Install HDMI Cables

These are top specification Hi-Definition AV Cables designed for Professional and Commercial installations. Designed to end the uncertainty and erratic behaviour you may have experienced from some of the other longer length cables on the market, these deliver reliable results. The construction features a heavy duty metal-moulded connector housing with high density triple layer shielding to guard against electromagnetic interference, high-level OFC copper wire with 340MHz (10.2Gbps) ultra-wide bandwidth for 1080p 3D video format and 7.1 channel audio. Protective braided outer cable sheath.

### Product Features

- HDMI™ 1.4v high speed Cable supporting 3D, 4K, ARC (Audio Return Channel)
- 24K Gold-plated connector for anti-corrosive and distortion-free

Code HDPROAV5 5m **£39.99**  
Code HDPROAV10 10m **£59.99**  
Code HDPROAV15 15m **£89.99**



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## HDMI 4 Way Distribution Amplifier

One input to four simultaneous outputs

### Features:

Connects one HDMI source to 4 HDMI displays  
supports up to top 1080p at the same time  
Distance: Source to Device-1.8m, Device to Device-15m, Device to Display-20m  
Cascadable to 3 levels - provides up to 64 HDMI signals

Code VS184 **£85.79**

## GIGAVIDEO 820 Wireless HDMI Sender

At last, a cable free solution for HDMI. Any of the two HDMI inputs can be sent wirelessly up to 30m to the receiver. The signal is sent uncompressed and remains up to and including 1080p. IR feedback gives you source control from the viewing area.

- Locate your HDTV or projector wherever you want.
- Mount the receiver (out of sight)
- Switch between 4 HD sources
- Operates even through walls (typically 15m)
- Supports all 480p, 720p, 1080i and 1080p
- Built in HDMI loopthrough for local viewing
- Sends the HD signal uncompressed

Code GV820 **£354.80**



## Component to HDMI Converter

Component Video to HDMI Converter

Takes in component video and stereo audio and gives you out HDMI up to 1080P. It's simple, small, neat, and it works really well.

Supported Component input res: 1080i/P

Video input: 3 x RCA phono

Audio input: 2 x RCA phono

Video Output: HDMI socket

Dimensions: (WxHxD): 84 x 28 x 40mm



Code CHUCH **£54.99**

## SCART to HDMI Upscaler

Converts analogue Scart or s-video into digital HDMI at a choice of resolutions up to 1080P. Great for connecting legacy equipment to an HDMI switchbox for simplifying your connections. Control is by front panel or supplied IR remote

### Input signals:

- Scart (RGB or composite)
- s-video
- NTSC or PAL

### Outputs:

- HDMI output 720p, 1080p, 1680x1050, 1360x768 and a choice of screen modes (16:9, 16:10, expand & subtitle).

Code HDUSPRO **£85.00**



## Felston Digital Audio Delay

If you own an AV amplifier the DD740 is the definitive answer to lip sync error for up to four sources

- 680ms delay (340ms for 9.6kHz signals)
- On-the-fly adjustment with no image overlay
- 36 user preset delays
- Remote control
- Automatic optical/coax conversion
- 4 digital audio inputs, 2 digital audio outputs



Code DD740 **£189.99**

## Keene IR Distribution Amplifier

- External receiver routes IR signals to internal wands
- Control all your equipment even when inside a cabinet
- Works with all popular remotes
- Complete system, easy to install and ready to use



Code IRBKITS **48.00**

### HDMI cables – HDMI plug to HDMI plug

1080p rated 3m length	HDHVV3	£14.99
1080p rated 10m length	HDHVV10	£33.69
Premium range 1080p rated 3m length	HDH3	£29.99
Premium range 1080p rated 10m length	HDH10	£49.99
Premium range 1080p rated 15m length	HDH15	£59.99
professional range 2160p rated 3m	HDHDC3	£39.99
professional range 2160p rated 7.5m	HDHDC75	£69.99

### HDMI cables – Adaptors

Mini Display Port to HDMI adaptor	MDPHDMI	£14.99
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### Video Conversion

Scart to HDMI (1080P)	HDUSPRO	£85.00
Component to HDMI	CP280H	£122.42
RGB to s-video	RGB2S	£69.99
Composite/s-video to VGA	AVT3310	£49.76
Composite/video to component	CPVSRGB	£68.70
Composite/s-video to HDMI	CM392	£219.05

### Video over CAT5

Composite/s-video over CAT5 (no IR)	C5QC	£89.99
Composite/s-video over CAT5 (with IR)	C5QCA	£99.99
Composite/s-video with four remote receiver	C5KDA4	£269.00
Component over CAT5	C5B	£259.99
Component over CAT5 (wallplate)	C5QCCP	£149.99

### AV wall outlet plates – single gang with rear HDMI socket

white	HCP26	£29.99
satin chrome	HCP26S	£39.99
double gang HDMI satin chrome	HCP26SD	£54.99

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## BDP100

### BLU-RAY PLAYER

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The BDP100 delivers exceptional quality of reproduction from Blu-ray discs as well as getting the best from DVDs and CDs – appreciate the benefits that real attention to detail in engineering can bring.

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